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ORIGINAL ARTICLES.

THOUGHTS ON SOME POINTS CONNECTED WITH PNEUMONIA.[1]

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My object in this article will not be to follow the old beaten path in an essay on the subject of pneumonia. Every standard author on the practice of medicine has furnished us with his chapter, while almost countless monographs have appeared on this subject. While there is almost universal consent and agreement given to our teaching upon the subject of pneumonia and its treatment as a whole, yet upon some vital points there is not such happy accord and harmony. While it would be profitless to attempt a review of our vast literature upon this subject or compile an essay therefrom, yet a few moments spent in the discussion of some doubtful points in regard to which there still exist diverse and conflicting opinions, may yield results of practical importance.

First, is pneumonia simply an inflammation of lung tissue, purely local, or is it a constitutional disease with this local manifestation?

Secondly, should general blood-letting or venesection ever be resorted to in its treatment?

Thirdly, are blisters ever indicated or permissible in the treatment of pneumonia?

Fourthly, does this disease ever present a stage or condition in which belladonna is indicated and is the sheet anchor to the patient's life?

My remarks on these topics will not be for the sake of theorizing or for theoretical discussion, but to try, with the lights and experience we have, to arrive, if possible, at results and conclusions of the most vital and practical clinical importance to patients suffering of this malady. And *first*, as to the nature of pneumonia, it is not a matter of indifference whether or no we entertain correct views, because upon those views will be based our practice, unless we propose, without reason or science, to adopt an empirical, haphazard treatment, which is not complimentary to the practitioner, and should not be satisfactory to his patient. Unless we propose to place ourselves upon the same dead-level and plane with charlatans, we must first inform ourselves as to the work we have in hand. No workman ever undertakes to perform a piece of work with certainity and success until he has informed himself as to the nature of that work. No practitioner of medicine can propose to himself or promise his patient to treat any disease rationally and intelligently until he has learned the nature or character of that disease.

Our predecessors for many long years viewed pneumonia as simply inflammation of lung tissue, and the spoliative treatment adopted by them was in keeping with those views. And even now there are physicians who hold to the same pathological ideas. If pneumonia be simply inflammation of lung tissue, and, *vice versa*, inflammation of the lung be pneumonia, certainly it should be treated antiphlogistically, just as it was treated fifty years ago; by blood-letting, purging, and a general depressant course. But the frightful mortality attending this treatment is a fearful commentary upon it. If the then prevalent and accepted idea of the nature of this disease (simply lung inflammation) was correct, the treatment they adopted, based upon that idea, was rational and scientific, and the mortuary statistics should have been very different and far more satisfactory. The fatality attending this antiphlogistic treatment was simply appalling. Even within my own recollection, to hear that a patient suffered of winter-fever, as it was vulgarly called, was to learn that he, probably, had one foot already in the grave. And so it continued until J. Hughes Bennet called a halt, and adopted a conservative, expectant and supporting treatment, since which time the mortality has been reduced 250 to 500 per cent. These results alone should be sufficient to convince us that either our ideas of the simple inflammatory nature of the disease were erroneous, or else, that anti-inflammatory treatment is a delusion and farce.

But putting aside these deductions, let us study for a little time a case of pneumonia prior to onset. The attack is usually announced by a chill, most generally during the night, which lasts a longer or shorter time from a few minutes to several hours in duration; which is immediately followed by constitutional symptoms of greater or less severity: the heart's action is accelerated and excited, as indicated by the number, force and power of its beats; the body heat is increased, the temperature running from a little above the normal to 104° or 105° F., with other symptoms corresponding. At the onset of this chill there was none, at most but little, congestion even, much less inflammation of the lung. What caused that paroxysm? Could it have been the effect of lung inflammation which, as yet, did not exist? If

[1] Read before the State Medical Society of Arkansas, April 22, 1885.

the chill announced the pneumonic attack, and at that time there was no lung inflammation present to produce that chill, how can we conceive that it was the effect or result of such inflammation? There was a cause producing that chill; there was no inflammation of the lung to produce it; hence it could not have been the effect of such inflammation. I have heard the suggestion advanced by the adherents of the local nature of the disease, that pneumonitis was an inflammation *sui generis*, peculiar and exceptional in consequence of the tissue involved. But, I would ask, is not simple, uncomplicated inflammation, whenever and wherever developed, identically the same, only modified and qualified, as to its activity or chronicity, by the higher or lower organization of the structures involved? And when, in the course of an attack of pneumonia, the lung inflammation has been developed, wherein, I would ask, is it peculiar, or does it differ, as shown by its manifestations and symptoms, from inflammation in other structures or localities? The first stage, in which congestion and engorgement —the precursors of inflammation—are taking place, lasts on an average from twenty-four to forty-eight hours. Then follows the second stage—that of exudation or effusion and solidification—in which all the essential phenomena of inflammation are developed. But how was it possible that the earlier features and symptoms of the attack should have been the result of inflammation, which, until this time, was not and could not act as a cause, because it did not exist? Just as well say that the eruption of measles, scarlatina, or small-pox, that makes its appearance from the second to the fourth day of the fever, is the disease of which it is merely the manifestation. Would you say that a person suffering of the fever of rubeola did not have measles until the fourth day of that fever, when the eruption manifested itself? What sickened the patient from the outset but the measles? and what was the eruption but the outward expression of it? The eruption—the local inflammation—is the manifestation of the constitutional malady.

Again, if the lung inflammation be the make-up and the whole of pneumonia, the gravity and intensity of the symptoms should have a direct and exact ratio to the extent and quantity of lung tissue involved. But from clinical observation and experience we know that this relation does not obtain. How often have we seen great constitutional disturbance at the onset and in the early stage, when physical signs gave evidence of but slight injury to the lungs? And in the sequel of the same case, when convalescence is about to set in and all the graver constitutional symptoms are yielding, the most marked evidences of lung troubles exist. The patient is convalescent because he has passed the crisis in his constitutional disease, and not because the lung inflammation—its local expression—is relieved; and the lung is soon convalescent for the same reason. Instead of the symptoms holding a direct relation to the extent of lung tissue involved, Flint, Sr., says, and the clinical observations of all of us confirm his views, that "the affection of an *entire* lung does not always give rise to symptoms denoting great gravity of disease. The febrile movement is not always intense and may be slight; the respirations may be but little increased in frequency; cough and expectoration may be not only not prominent, but even wanting, and the system may be but little disturbed. These remarks will also apply to double pneumonitis." How could this be if the lung inflammation were the sum total of the disease? Bartholow says "there is a growing belief that pneumonia is a constitutional disease. It differs from other inflammations in that it is self-limited, and terminates by crisis." These are features, I suggest, that characterize no ordinary inflammation. Fothergill says: "It is now generally recognized that pneumonia presents in itself no special indications for treatment." Again: "There is no treatment for pneumonia in itself." Why, I would ask? Is this true of ordinary inflammation? Is it not treatable and amenable to treatment? Verily so, but the lung inflammation in pneumonia is the attendant, the effect, the sequel of a disease, definite and certain in its course, and that terminates in a crisis just as certainly as measles, small-pox, or any other of the eruptive fevers, and is no more amenable to treatment or cure than they. This is Fothergill's idea, as I gather it. Again he says: "Our ancestors bled to death's door, while Rososi gave huge doses of tartar emetic. More recently J. Hughes Bennet has adopted the expectant treatment with liberal supplies of food. Every new remedy almost, in turn, is tried for pneumonia, and found to be followed by a large per cent. of recoveries, but in how many cases the recovery is rather in spite of, than in consequence of the treatment employed, is a doubtful question." And the same remark is applicable to other constitutional diseases with local manifestations, but never to simple, uncomplicated inflammation.

With the lights now before us we can realize and appreciate the mistakes made by physicians half a century ago in their attempts to cure pneumonia. Their effort was to strangulate, to jugulate, to cut short and cure the lung inflammation, not understanding and comprehending the true nature of the disease, and the result was the fearful mortality that attended this treatment. True, some patients recovered from the effects of this spoliative treatment, but it was because their vital powers were so strong and elastic that they reached a favorable crisis in spite of the doctor's well meant, but ill-advised medication. And although physicians may still differ as to the nature of the disease, there is a marked sameness in their treatment. Even those who hold to the local nature of pneumonia, while they discard and ignore their most efficient and powerful agencies for its subjugation and cure,—to-wit, the antiphlogistic régime, they anxiously wait and look for the anticipated crisis, when the patient will pass through and make a safe landing upon the shores of convalescence. Now, instead of trying to master and drive nature, we content ourselves with watching and meeting exigencies as they may arise, until our patient shall have had time to get well, which will be the result in a vast majority of simple, uncomplicated attacks of pneumonia.

It is of the first importance, then, that we clearly recognize the true nature of pneumonia, and that it is not simply a curable inflammation to be jugulated

by antiphlogistics, and thus, in our efforts to cure, thrust ourselves in the face of nature and thwart her means of restitution; but that it is a constitutional, self-limited disease that will run an exact, definite course, and terminate, most generally, in a favorable crisis, unless, by our meddlesomeness, we constitute ourselves the slayers instead of the rescuers of our patients.

Should general blood-letting or venesection ever be resorted to in the treatment of pneumonia? If so, when and under what circumstances? These are questions of vital importance to every practitioner who is called upon to treat this disease, especially alarming and fatal, when viewed from the standpoint of fifty years ago. If pneumonia be simply inflammation, we possess no agency so potent and prompt for its subjugation as the lance; but the great fatality that attended its indiscriminate employment was so shocking and appalling that it was finally almost totally abandoned; and for the last quarter of a century or more, it has been looked upon, by the vast majority of the profession, as the opprobrium of the healing art, and especially in the treatment of pneumonia, and to be dreaded more than the disease itself. Is this right and as it should be? Because an agent—potent for good when discreetly and scientifically employed—is abused, is that sufficient cause why it should be totally discontinued and ignored? What, under the same ruling and judgment, would become of every prominent article in our materia medica? yea, of every bounty and blessing with which nature has supplied us? If formerly we bled too much, too frequently, too copiously, and too indiscriminately, is it not certain that we do not bleed enough at the present time? Because the attempt to cure pneumonia with the lancet proved a failure, is that conclusive evidence that it should never be employed as a temporary expedient or auxiliary in the treatment of that disease? I have been arguing against the idea that pneumonia was simply, and nothing more than, lung inflammation, and *a priori*, against a general and constant antiphlogistic régime that would be required to meet and combat it, yet do not cases sometimes arise in which the lance is not only permissible, but imperatively demanded? Prof. Flint says, "Its employment is warranted when there is high febrile excitement, the heart's action being increased in force and power, and the patient of a robust or plethoric constitution." Unless some vital organ, previously weakened, be seriously threatened under the above conditions (and if such there be, the lance, I imagine, will be impotent for its salvation), I totally dissent from the above teachings; because pneumonia is not a curable inflammatory disease, but is definite, self-limited, and tending to a favorable crisis; while the effect of bleeding is spoliative, certainly and inevitably aggravating the very dangers that beset the patient later in his disease. And because further, we possess other means and agencies with which, in ordinary cases and under ordinary circumstances, as indicated by Prof. Flint, we can obtain quite all the good results promised by the lancet, without its serious spoliative effects, to which our patient may succumb at the very time when he should pass a favorable crisis.

Without delaying to argue it I submit this broad, general proposition, that, in this latitude and climate, with their multifarious unending, debilitating and enervating causes, unless it be in exceptionally rare cases, venesection is never demanded or permissible to combat and control high inflammatory symptoms in pneumonic patients. When reaction has been established and inflammation developed, there is no further indication for the lance, even if there had been any previously. But there is a condition in which I have seen patients die that I believe might have been saved by the lance if it had not been interdicted and prohibited by the ghastly horrors that cluster about its point in the minds of physicians, patients, and friends; and in which, should I ever see patients again, I will use the lance, though their lives, and my reputation and standing as a physician, may flow out and away with the venous current. That condition is, when congestion is overwhelming, and the heart is about to be drowned in its own blood. There is no accomplished inflammation as yet, but the patient's every organ and symptom indicate the most immediate and imminent danger; and I know of nothing half so likely as the lance to procure him the needed respite and relief. The condition is that of great depression and prostration, characterized by general stasis and capillary congestion, and we can readily understand and comprehend how the relief is obtained. The patient is dying under the first fell stroke in the congestive stage of his disease.

The heart, the lungs, and every vital organ is being submerged and drowned, while his sensibility is so deadened and paralyzed that he is unconscious of his real condition. He will tell you that he is not suffering, is not sick much, but will be well in a day or two, and is astonished if his watchful and observant physician expresses any apprehension as to his condition. I have seen patients and friends die thus, and once, in just such guise, death invaded my own home circle. The ordinary remedies and appliances having failed, what would you do in such a case? What will, if anything, avert the effects of this first dire stroke? I have searched my standard authors and journals in vain for an answer. Not one of them even alludes to such a condition.[1] But the most of us, I imagine, at least the older members of the profession, have seen such cases; and we have tried and seen tried, fruitlessly and in vain, the whole routine of remedies and agencies usually employed in such cases. Should not the lance be resorted to in such a case, in the hope that it might give new motion and life to the almost stagnant current? I have never resorted to venesection myself, nor am I acquainted with any physician who has, to relieve this condition; but everything else having failed, and death coming speedily on, should it ever be my misfortune to meet such cases again, which I pray God forefend, I will try the lance as a last hope, as a *dernier ressort*. If then my patient dies I would have a conscience void of offense, knowing that I had exhausted the last re-

[1] In the Medical and Surgical Reporter, of March 14, 1885, I find an article by Dr. Hiram Corson, of Conshohocken, Pa., upon the "Hygiene of the Aged," in which he refers very forcibly to this exact stage and condition, and suggests venesection for its relief.

source in my efforts to save. Except this condition, I know of none other in attacks of pneumonia demanding or permitting the use of the lancet.

Our third inquiry is, are blisters ever demanded or permissible in the treatment of pneumonia? Here again we have quite a diversity of opinion and practice, arising mainly, I have no doubt, from a lack of positive and definite knowledge of the therapeutical effects of counter-irritants. "Ubi irritatio ibi fluxus" was the idea that obtained in the mind of the medical profession long years ago, and acting upon that idea counter-irritants were called into use. There is a pretty general agreement in sentiment and practice as to the beneficial effects of counter-irritants, excepting vesicants or blisters; but here there are conflict and diversity of opinion. If they are to be employed at all in the treatment of pneumonia, what are the indications demanding them, and in what stage of the disease? In the first stage, while congestion and engorgement are taking place, putting aside the annoyance and disturbance that necessarily attend their use, can they promise or accomplish anything more than mustard or other counter-irritants, in conjunction with warmth and moisture? If so, how? This is not the stage of the disease in which it is claimed, by those who believe in their beneficial effects, that they should be employed. Prof. Flint says, "blisters are not advisable on account of the general disturbance which they are apt to occasion, and their interference with physical examinations of the chest." I think this objection weak and insufficient, and, the latter part of it, unworthy its great author; because it would not be right to deprive a patient of the benefit that an agent or remedy might afford him, merely because it deprived us temporarily of part of our examination. Prof. Flint is a wonderful success and prodigy in the art of auscultation and percussion, and by these means can lay bare the conditions and workings of the thoracic organs as clearly as if they were exposed to the natural eye, but I think his protest against blisters, as stated above, more like an objection than a reason. Fothergill says, "The utility of blisters in pneumonia is doubtful. The advocates of such a plan have failed to furnish convincing evidence of the beneficial effects produced thereby." Bartholow says, "Counter-irritation is useful during the stage of congestion, . . . but a fugitive counter-irritant, such as a mustard plaster, is all that can be properly used. . . . When the crisis occurs a blister is very useful." Although this last declaration may be true, the question naturally arises, how does he know it to be so?

Why is there such discrepancy among these authors on this subject? I can account for it only on the hypothesis, as stated before, of a want of definite and positive knowledge as to the action of these agents. During the stage of solidification and hepatization, and about the crisis—the time when it is claimed they exert their most marked beneficial effects—we cannot account for their action upon the proposition that where there is an irritation there is a fluxus or flow, because the affected lung is already anæmic in consequence of the deposition having blocked up the vessels and deprived it, mechanically, of the usual amount of blood. It is hepatized and solidified, the vessels ramifying it are clogged and blockaded, and consequently there is less blood in it than in health. Hence, the object of blistering cannot be to divert or draw the blood from the solidified lung which it does not contain. We must then look for some other explanation of their beneficial therapeutic effects in such cases, if really they produce such, and here, in the present state of our knowledge, we are at sea. By what means a timely blister in cases of pneumonia, applied just as the patient approaches his crises, works its good results, whether through reflex nervous action, stimulation or otherwise, I know not, but that I have observed good results from the use of such a blister, and seen it assist greatly the patient to pass a favorable crisis, I firmly believe. Yet, as the disease is self-limited and terminates in a crisis, the same results might have occurred without the blister. But feeling conscious that I have observed similar good effects from the use of blisters when applied in diseases that were not self-limited and wont to terminate by crisis, I feel disposed to attribute the good results, in both instances, to the same agent, to-wit, the blister.

The fourth and last, but by no means the least important of my queries, is, does pneumonia ever present a stage or condition in which belladonna is indicated and is the sheet-anchor to the patient's life? There is no allusion to it, as such, in any works upon practice, or in medical journals; at least I have made search, in vain, for something on this subject. If I have ever seen or read anything upon the use of belladonna in the treatment of pneumonia, I have entirely forgotten it, and consequently can remember nothing of the ideas or suggestions contained therein. Yet there is a stage and condition that sometimes comes up in the course of this disease in which, if anything, belladonna is the sure and only anchor to the patient's life. When is the stage, and what are the conditions that indicate its employment? It will be observed that I restrict its use to a certain stage and to certain conditions; the stage is the period just preceding the crisis, and the conditions such as the following: Frequency, or not, and feebleness of the heart's action; a feeble, frequent and labored respiration; great dyspnœa rapidly tending to apnœa; pupils contracted almost to a point; in some cases a pale and cadaveric, in others an asphyxiated or cyanotic appearance of the patient, especially of the lips and extremities; the skin is relaxed and pouring out the patient's life, while the kidneys are refusing to perform their proper functions of waste elimination, and the mental faculties are being dethroned, either by violent and active or low muttering delirium. While all the above symptoms will, probably, not manifest themselves in any one case, there will be enough of them to indicate great prostration and failure of the vital organs.

What will we do for our patient in this condition? Opium, quinine, alcoholic stimulants, digitalis, nux vomica, ammonia, counter-irritants with warm applications have all, or in part, been employed, and still your patient goes from bad to worse. Now is

the time for the application of the fly blister we say, but we can't tell why or how; and we employ it empirically, believing and hoping that it may do good in some unknown and mysterious manner; but still our patient is not relieved. What is the difficulty that these agencies have not wrought the desired and anticipated results? If we can determine that difficulty and then find some agent to meet it, then, instead of standing helpless and impotent with folded hands, watching our patient until life shall steal away from him, we can, with confidence and boldness, step in and rescue him. As stated before, the symptoms and conditions indicate great and general prostration. The nervous, circulatory, respiratory, and capillary systems are all depressed. In a word, there is an alarming loco-blood-pressure present. The vaso-motor nerves that supply the brain, heart, lungs, skin, and every vital organ in the economy, and contract their blood vessels, thus keeping up the normal blood-pressure, are stunned, deadened, and partially paralyzed, while their antagonists, the vaso-inhibitory or trophine nerves, are dilating these vessels, thus bleeding the patient to death into the capillary vessels of his own body at the expense of the proper blood-supply to the vital organs, which are comparatively exsanguined and anæmic.

In consequence of the paresis of the vaso-motor nerves, and the consequent absence of their contractile influence upon the blood-vessels, coupled with the dilating influence of the vaso-inhibitory nerves, the following conditions will necessarily be developed: Partial stagnation of the circulation, and undue amount of blood in the capillaries with sluggish motion and lowered blood-pressure, with all their attendant phenomena. Are not these the exact conditions with which we are brought face to face in the case of our patients? If now we can find some agent that will stimulate the brain and excite and arouse the vaso-motor nerves to their proper action and at the same time control their antagonists, the vaso-inhibitory nerves, then we are prepared to meet the exigencies and demands of the case. I don't propose to say that we shall not employ auxilliaries; nor do I propose that belladonna is specially indicated except in the exact stage and under the peculiar conditions indicated above.

Now, let us examine the physiological effects of belladonna upon the system; and I am indebted solely to Prof. Bartholow for a discussion of these effects, as the account of belladonna and its physiological effects, as given by the U. S. Dispensatory, is insignificantly brief and worthless. And first as to the brain. The cerebral effects of large doses of belladonna are decidedly and markedly stimulating, as manifested by headache, vertigo, illusions, hallucinations, delirium, and even somnolence. The delirium may be gay and laughing or busy; or it may be noisy and furious; the patient fighting and striking all who approach him. In lithol doses convulsions may occur, or profound stupor may result after a period of delicious excitement. Under certain circumstances a tetonic action, very similar to that of strychnine, is developed. Belladonna, by virtue of its inviting a greater than normal transmission of blood through the tissues, increases metamorphosis, and the results of this are manifested in an increased diminution of waste products. So you will observe that it is a powerful stimulant and excitant to the nervous system, its effects even simulating and approximating those of strychnine. Upon the circulation its action is remarkable and unique. Its first and immediate effect is to slower the heart's action, but a rapid increase in the number of pulsations quickly follows. Not only is the number of the heart-beats increased, but there is a corresponding increase in their vigor and form also, and the area over which the pulsations are distributed is enlarged. It has been conclusively proven that the increased action of the heart is due, first to stimulation of the cardiac ganglia of the sympathetic, and secondly, to a paralyzing action the pneumogastric terminal filaments. In other words, the motive power of the heart is increased in activity and force, and the inhibiting control is lessened. The stimulation of the vaso-motor centres by belladonna is not confined to the cardiac ganglia, but extends to the vaso-motor ganglia throughout the body, and a general rise of blood-pressure takes place, owing to contraction of the arterioles. It is a singular fact that the decided influence of belladonna rapidly produces a state of over-excitation. Upon the function of respiration belladonna increases the number and depth of respiratory movements, but the increase is not in the same ratio as is the character of the pulse-beat. The more rapid action of the heart, the immense respiratory movements, and the contraction of the arterioles, result in an increased supply of blood to the periphery, more rapid nutritive changes and consequent elevation of temperature.

Do these physiological effects not meet and fulfil as nearly as possible the indications in our patient's case? And not theoretically or empirically, but rationally and scientifically, as the established and demonstrated effects of the drug? I recommend it in the condition indicated, not because some practitioner or experimenter employed it in a similar case and concluded it produced good results, as is the case with too many of our therapeutic agents, chief among which are blisters, but because its effects have been observed and proved, and we know that the article that will produce these effects must be beneficial in controlling and counteracting the symptoms in the condition indicated. We use it scientifically and rationally, not ignorantly and empirically. Blisters recommend themselves clinically; belladonna recommends itself physiologically and therapeutically. These are my views upon the action and utility of belladonna in the condition and under the circumstances indicated, and I wish I was able to elaborate and confirm them by a greater number of clinical cases than I have. It is but recently that my attention was directed to this article in such conditions, and I have but few cases to report in which its virtues have been tested.

Case 1.—Mr. R. H. P., white, 52 years of age, rather feeble and delicate physically, with an hereditary taint of tuberculosis in his family, several brothers and a sister having died of that disease, had a violent attack

of pneumonia of the right lung, March 13, 1884. The attack was ushered in with a chill in the night of the 13th, and I was called to see him the following morning. His case pursued the ordinary course under the present and approved treatment until the sixth day of his attack. I proposed then to apply a fly blister, to which he earnestly objected on account of some preconceived prejudice. On the morning of the sixth day of his attack his condition and symptoms were those of alarming depression and prostration, in spite of the soothing, supporting and stimulating measures I had employed with him. His pulse was weak and feeble, but not rapid, his respirations were rapid, forty-two to the minute, shallow and labored, attended with great dyspnœa tending to apnœa; his lips, face and extremities were asphyxiated and cyanotic, and his skin relaxed and perspiring profusely. In a word, there was great prostration of all the vital organs, with its attendant phenomena. Would a fly blister have relieved him? I doubt it, for I don't know how it could have done so, and I have seen it fail of relief in so many similar cases. But being acquainted with the physiological effects of belladonna, it occurred to me that they would meet the indications fully and exactly. I put him upon four-drop doses of the fluid extract of belladonna every four hours, and after three or four doses all of his alarming symptoms yielded, and in due time he passed a favorable crisis and made a good recovery.

Case 2.[1]—"W. A., white, age 45 years, was seen by me Nov. 5, 1884. Condition, acute pain in right side, pulse 100, temperature 102° F. Diagnosis pneumonia. Put him upon the usual treatment; gave quinine every four hours in five-gr. doses, whisky, opiates and heart-sedatives. Case took the usual course until about the fifth day, when great difficulty of breathing came on by spells, at which times he had to be raised up in the bed to breathe, the perspiration pouring off of him. I put a large fly-blister over his side and put him upon carbonate of ammonia and digitalis. Seventh day, condition unchanged, same treatment continued. Blister drew well and was well filled. I told the friends of Mr. A. I saw no chance for him, but would put him on the belladonna, as suggested by my friend Dr. Hart. Began the treatment on the evening of the eighth day. Ninth day, condition much the same, except he had no more spells of difficult breathing and was not sweating. He went into a typhoid condition, but finally got well."

I would suggest that, if the belladonna had been employed in this case on the sixth day, when the symptoms indicating its use first manifested themselves, its effects might have been more marked and decided. I would suggest, also, that the surroundings of this patient were of the most unsatisfactory nature, even the house in which he was sick being so open that it did not protect him against the changes and inclemencies of the season; and Dr. Corrigan may congratulate himself upon being able to steer him safely through his attack.

Case 3.—"Saw Mr. W. on the 26th of December, 1884. White, age 59. Had been sick for a week and treated by Dr. M., who, he said, had gone off on a spree; could get no well authenticated account of what he had taken. Present condition, pulse 120, temp. 105° F., skin soft, cough very troublesome, spitting up frothy, bloody sputa. Breathing rapidly. Diagnosis pneumonia of left lung, the right did not seem to be involved. Ordered large poultices over left lung, put him upon ten-gr. doses of quinine, alternated with ten drops laudanum, ten drops ergot F. E., and five drops fluid extract of belladonna, to be given three hours apart. He had spells of difficult breathing that came on every four hours. I did not see him in one of those spells, but I considered the case a bad one, first, on account of his previous bad health; second, on account of his age; and third, because of the bad surroundings and previous treatment. In consequence of high water overflowing the creeks, and inclement weather, I did not see him again until the 30th. Treatment had been kept up as I directed, and on my second visit I discharged him. He made a good recovery.

"In both of these cases," continues Dr. Corrigan, "I consider that belladonna acted well, and, judging from past experience in similar cases, I think both these cases would have died if it had not been for the belladonna."

Case 4.—(Reported by Dr. S. M. Corrigan). "January 30, 1885, I was called to see Mrs. W., age 33, white, who had a chill the previous day, followed by acute pain in the right side; diagnosis, pneumonia involving entire right lung. Pulse 98, temp. 104° F. Put her upon the usual treatment, but without apparent benefit. She gradually grew worse until the morning of the sixth day, when her temp. was 103½° F., pulse 90 and feeble, patient very restless, breathing difficult and labored, skin not acting properly, the expression haggard and anxious, all indicating a speedy fatal termination of the case. At the suggestion of my friend Dr. Hart, I put her upon the fluid extract of belladonna, four drops every four hours. When I made my visit next morning, patient living four miles from town, to my great surprise and delight, I found her greatly improved, temp. 101½° F., pulse 100, skin acting nicely, face of a rosy hue, had passed a good night, and, to use her own words, she said, 'Doctor, I am going to get well now; feel like I will be up in a few days.' Continued treatment, and in due time my patient passed a favorable crisis. I attribute my success in this case to the belladonna, I have used it in several other cases with decided benefit."

It may be objected that the apparent good results obtained in these cases were merely coincidences, and to establish the claims of this agent in the conditions indicated, a more extended and thorough experimental and clinical test must be employed. The charge would be good and the insufficiency of the meagre statistics given admitted, if its beneficial effects in such conditions come to be established and proven by statistics, but I don't propose to base its merits and claims upon experiments clinical and empirical, but upon its known, determined and es-

[1] I am indebted to Dr. A. N. Corrigan for the report of cases 2 and 3, and to Dr. S. M. Corrigan for that of case 4.

tablished physiological actions and effects, which as certainly attend upon and follow its administration as effects follow causes. Again, if belladonna is capable of producing the beneficial results I claim for it at this dangerous and critical stage of pneumonia, it is thrice welcome as coming to our help and relief at the very moment when other agencies have failed us, and our patients most need assistance. In many instances, probably, the most prompt and effective action would be obtained by the use of atropia hypodermically. And I would not limit it to cases of pneumonia, but extend its application to other diseases, should such a combination of symptoms arise as to demand an agent capable of producing the complex and powerful effects that follow the use of belladonna.

TETANUS[1].

BY WM. A. BYRD,

OF QUINCY, ILL.

Next to hydrophobia, I know of no isolated non-epidemic disease more dreaded by both the physician and patient than tetanus; a disease much more common in some districts than others, although the localities may be very near each other. I wish to call attention to the two distinct beliefs in its nature. One that it is humoral and zymotic, the other that it is a condition of reflex nerve irritation. Now if it was zymotic in its origin, it should follow a more fixed course of symptoms than any cases that I have seen, or had the pleasure of reading the records of. Take our well known zymotic diseases, and we know the different stages come on regularly and progress with a certain precision in all cases. There may be cases much milder than others, but we never expect to see a case of small-pox end in a week or to commence without certain definite initial symptoms.

Such is not the case with tetanus. The initial stage may be all the way from half an hour to three weeks or even longer. The other view, that it is a reflex nervous trouble, may be substantiated by the irregularity of the time that passes for the disease to manifest itself. What the changed condition of the nerves is at the seat of the injury has not as yet been ascertained, but I cannot refrain from thinking that pressure has something to do with it. In all the acute cases that I have seen, there has been an undue degree of tumefaction existing in the wound, and in the chronic cases the cicatrix has been unusually dense. In all the acute cases that I have seen, it has been my practice to incise freely in the neighborhood of the initial lesion, removing, if I think necessary, some of the tissue to allow for swelling; then I have kept the patient under the influence of chloral hydrate and bromide of potassium to relieve them of the agony that they endure; and for the purpose of acting permanently upon the spinal cord, I have, at the suggestion of the late Dr. John T. Hodgen, given large doses of Fowler's solution. In a case which occurred in Quincy, a few years ago, the patient had his hand mashed; in a little while, tetanus set in. He suffered most excruciatingly, the opisthotonos was extreme, he was bathed in perspiration, and the lifting of the window curtain to let in more light, or a heavy step on the floor, or a draught of air striking him would cause him to beg piteously for some one to kill him and put him out of his misery. I gave him twenty drops of Fowler's solution every two hours for over a week, watching carefully all the time for any symptoms of arsenical poisoning, that they might be met at once. No such symptoms appeared, and he made a good recovery, and is now driving his team daily on our streets.

A few weeks after I had discharged him, I was called to see a young laborer who had had his foot pierced by a large splinter. Lock-jaw set in, and, though not to severe, as in the first case, I put him on the same treatment. In two weeks he was greatly improved but exposed himself on a cold rainy day, had a relapse and died.

In regard to the method of treating chronic tetanus perhaps it will be just as well to report a case that was one more interesting, to me, than any I have ever known. The morning of July 18th, I met Dr. M. Rooney, the physician to St. Mary's Hospital and he informed me that there was a case of tetanus at the hospital that had entered as a case of paralysis, from a diagnosis that had been made at one of the public institutions in St. Louis. He further stated that the man had received an injury on the head. When I reached the hospital, I found a well-nourished man, about 35 years old, with set jaws and spasm of all the muscles of the body. He stated that three weeks before, while working on a bridge, he fell, striking a stone and inflicting a wound over the right eye. The wound soon healed, but in about ten days he began to get stiff, could not walk well, had difficulty in chewing his food, and at night would have spasms of the general muscles, with excessive perspiration. This becoming worse, he went up to St. Louis, where his trouble was pronounced paralysis. Having friends in the North, and the outlook being so gloomy, he determined to make his way to them; but when he got to Quincy, he felt so much worse he stopped at a hospital.

The case was a plain one of tetanus. The scar on the eyebrow showed that it was recent and also that it involved the superior orbital notch. He was put under an anæsthetic, and the cicatrix cut out. As soon as the bone was reached a fracture was discovered. I applied the trephine, removed the injured bone, and dressed the wound. As he recovered from the anæsthetic he vomited, and having by some means swallowed some large pieces of beef's liver, they could not pass through his clenched teeth, so they took the next best direction, that of the least resistance, and went down the trachea. Then there was confusion, the attendants all declaring that the man was dead, and so he seemed. Right then I began to have a deep and abiding sympathy for the surgeon that loses his patient during an operation. I was utterly unprepared for a tracheotomy, with the exception that I had pressure artery forceps and tenacula out of the case, as also a scalpel. I quieted them by telling them that it would take the man at

[1]Remarks before the Mississippi Valley Medical Society, Sept. 9, 1885.

least a minute to choke to death, and that as I could perform tracheotomy in half a minute, that we had plenty of time. I picked up the scalpel and laid the trachea open for at least an inch below the cricoid cartilage, incising the superior thyroidal vessels. The flow of blood was appalling, but passing my finger into the trachea so as to lift it and the accompanying tissues, I seized the vessels on either side of the cut *en masse* with pressure forceps, and stopped the hæmorrhage at once. We then proceeded to get the liver out of the trachea, which we easily did by holding the wound open with tenacula. The mass of liver was fully as large as my whole thumb. After clearing out the trachea, I inserted two sutures on each side of the wound in the trachea to the edges of the skin, and fastened the ligatures to pieces of adhesive plaster, and drew them back over the shoulder so as to hold the wound gaping; a method introduced by one of the greatest and most original surgeons America has ever claimed, the late Dr. Henry A. Martin, of Boston. I digress here, to call your attention to this method of performing tracheotomy, because I have performed tracheotomy, and had the nurse, a physician, fall asleep and allow the tube to become blocked up with mucus and strangle the patient. That event has given me a horror of tubes in certain conditions.

The patient was put upon chloral and five drops of Fowler's solution every two hours. In three or four days erysipelas set in and involved nearly his whole face. That lasted for about a week, when he got better. In about two weeks he was so much improved, that I changed him into a convalescent ward. His bed was so placed that he was in a draught. The next morning when I came to the hospital, he was suffering with acute laryngitis, and I found it necessary to reopen the trachea to allow him to breathe. Not being prepared to hold the trachea open as before, I took two hairpins and bent them into the letter S-shape, and by fastening tapes to one hook and putting the other end of the hook in the trachea, and tying the tapes behind the neck, I succeeded admirably in holding the wound open. That looked so much like barbarous surgery, that I brought out a large tracheotomy tube in the afternoon, and taking the hairpins out, replaced them with the tube, but when the patient would cough, it would cause the mucus to block the tube and he would not tolerate it, but made me take it out and replace the hairpins. These he wore for about a week, when the inflammation in the larynx having subsided, they were taken out and the wound quickly healed. He went on to a perfect recovery and was discharged from the hospital well, September.

P. S.—Since writing the above, Frank Cason, a 5 year old son of Robert B. Cason, living nine miles west of La Grange, Missouri, has been brought to me suffering with tetanus, the result of a fracture of the skull from the kick of a horse, over the outer side of the orbital eminence. The fracture was undetected and the flesh wound healed. Ten days afterward he exhibited strange symptoms, and the physicians that saw him pronounced it a case of paralysis. When I saw him, I detected at once, lockjaw from depressed fracture of skull. September 18, just two months after the first operation, I cut down through the scar, at St. Mary's Hospital, with the assistance of Drs. Rooney, Woods, Rook and several medical students, and took out a depressed fragment of bone as large as the last joint of my little finger. The child is doing very well, being better as soon as he was from under the anæsthetic.

ABSTRACT OF A PAPER ON THE SUCCESSFUL TREATMENT OF LACERATIONS AND FISSURES OF THE OS UTERI OF LONG STANDING WITHOUT SURGICAL OPERATION.[1]

BY BEDFORD BROWN, M.D.,

OF ALEXANDRIA, VA.

During the past twelve years the writer has embraced every opportunity to test various means for the purpose of devising some method of treating these injuries successfully, without resort to operations. A very large proportion of females suffering from these afflictions have neither the means nor the opportunity of seeking the aid of the specialist. The writer believes that he has perfected a simple method which can be used by all practitioners of intelligence for the treatment of these cases successfully with time and care without the necessity of operation. The agents resorted to in this method are entirely of a local character.

Concealed fissures are often found after labor in the mucous membrane of the cervical canal, and are the cause of an infinite amount of local disease in the form of endocervicitis, hypertrophy of the adjacent tissues, inflammation of the submucous fibrous tissue, leucorrhœa, and often painful menstruation. One of the most usual seats of these fissures is at the internal os. Here the mucous membrane and submucous structure is split through, often to a considerable depth. The rent here, as in the case of fissure of the rectum, will remain as a source of trouble for years.

It is highly probable that these concealed fissures are the prime cause of a very large proportion of the cases of cervicitis and their consequences, found in women who have borne children. The No. 1 solution of nitrate of silver reaches these wounds effectually, stimulates a new action, and heals them from the bottom readily.

With a view of promoting the healing of the open lacerations and fissures, however small, which act as a centre for the radiation of morbid influence, I have tested every standard agent as a local remedy—Churchill's tincture of iodine, Battey's solution, pure carbolic acid, iodoform, chromic acid, solid nitrate of silver. They all failed signally to promote healing and closure of the laceration. The application of the solid nitrate of silver invariably acted as a violent irritant, increasing inflammation, pain, discharge and hæmorrhage. Finally a solution of crystals of nitrate of silver, graduated so as to adapt it to the particular parts to be applied, and the various stages

[1] Read before the Medical Society of Virginia, Sept. 17, 1885.

of progress, was used. The effects of this agent proved that lacerations and fissures of long standing and the most aggravated character, complicated with great degree of inflammation, hypertrophy, subinvolution, and a certain degree of pelvic cellulitis, were curable. An experience in the use of this agent in about twenty cases of lacerations and fissures, from the slightest to the most aggravated form, treated in the past ten years, shows conclusively that the most extensive wounds (many of them bilateral), have been made to heal and close up permanently. The os and cervix have invariably been reduced to their natural appearance and dimensions without contraction.

The treatment requires for completion from six to twelve weeks. It can be resorted to regardless of the presence of hypertrophy, inflammation, cellulitis, or subinvolution. The solutions employed were of three different grades.

SOLUTION NO. 1.

℞ Argent. Nitratis (cryst.)..... ℈ss
Aq. distil..... ..... ℥i M.

This is the form to be applied to the interior of the cervical canal, which is always in a state of catarrhal inflammation arising from the laceration or fissure which penetrates it. The remedy is applied down to the os internum by means of a silver or whalebone probe, wrapped with absorbent cotton.

SOLUTION NO. 2.

℞ Argent. Nitratis (cryst.).....ℨiiss
Aq. distil..... ..... ℥i M.

This solution is to be applied, or rather freely painted, over the external surface of the os and cervix uteri, by means of a large camel's-hair brush, including the cavity of the laceration and granulating surface, until the whole presents the appearance of a grayish white coating. The application usually gives no pain, but rather acts as a soothing or sedative agent, protecting the exposed sensitive branches of the torn nerves and the tender granulations. The coating will often remain from one to three days. While the remedy acts as a protective, it also acts as a mild but decided stimulant, to develop a new and more vigorous growth and a more healthy action. Thus underneath this coating of silver the processes of healing and filling up the gaping wounds and the formation of a healthy cicatrix are in active operation.

At this stage the remarkable action of the remedy is manifested in the reduction of engorgement, in stimulating the process of absorption, and in removing all hyperplastic deposit and hypertrophy. By changing the morbid action in the wounded part, and affording an impervious coat, it suspends the absorption of septic matter and interrupts the action of the cause of cellulitis, which gradually subsides under its influence. The silver applied in this manner never acts as a caustic or destructive agent, but only as a stimulant to vital action.

SOLUTION NO. 3.

℞ Argent. Nitratis. (cryst.)..... ℈ss
Aq. distil..... ..... ℥i M.

Solution No. 3 is not only designed to be applied to the external surface of the cervix uteri, after the healing and closure of the laceration have been completed, but also when there remains a degree of hypertrophy or hyperplasia, or ordinary engorgement, accompanied with induration. A solution of this grade will generally reduce these conditions and leave the cervix soft and healthy.

It is unsafe to leave the cervix either in a hypertrophied or engorged state, as that might be the basis of future inflammation and reopening of the wound. A majority of the cases thus treated have since given birth to children. Some have borne three children since treatment without difficulty. All have been entirely relieved of all unpleasant symptoms. Examinations held after the birth of each child showed a perfectly healthy os and cervix.

The application should be made every four days. During the intervals a douche of warm water, for the purpose of removing any accumulation of secretion, should be resorted to every morning.

It is the custom of the writer, in all cases of labor under his charge, to make a digital examination, at the time of the delivery of the secundines, of the os uterus, with the design of ascertaining the presence of laceration. If it exist, warm water douches containing biborate of soda, boracic acid, and carbolic acid in solution, are used after the first day, with the intention of maintaining a perfect state of antisepsis, thus preventing infection, and promoting the healing of the wound by first intention, if possible. If fever and cellulitis should come on notwithstanding this procedure, where no laceration can be detected, it would indicate the existence of a concealed fissure deep down in the cervical canal near the internal os, which has never been reached by the antiseptic douches. In the event that healing by first intention fails to occur, antiseptic treatment and cleanliness of the wound are continued, and after two months the local treatment is commenced with the graduated solutions of nitrate of silver, with the certainty of a speedy restoration.

BROMIDE OF ETHYL IN LABOR, AND CLAIMS CONCERNING PRIORITY OF ITS USE.

BY H. LANDIS GETZ, M.D.,

OF MARSHALLTOWN, IOWA.

I have recently noticed some contributions upon the use of bromide of ethyl in labor,—and while I have not lately used the drug, I have done so in the past, and can give something of an experience relative to its effects upon the patient in confinement.

Some time during the month of January, 1880, I received a pamphlet from Dr. R. J. Lewis, of Philadelphia, who had used the drug in surgical practice, wherein were set forth its uses and advantages as an anæsthetic in surgical operations. Being always a decided advocate of the use of anæsthetics in obstetrical practice, the idea occurred to me that if the new anæsthetic was what was claimed for it, it would certainly also answer a good purpose in obstetrical cases, and might possibly possess advantages over chloroform; and in a paper read before the Iowa State Medical

Society, which convened at Des Moines, January 27, 1880, I suggested the use of the drug in obstetrical cases. Shortly afterwards I procured the new anæsthetic and inhaled some of it, that I might compare in a degree its effects with those of chloroform and ether. I found that it produced in a measure the excitement and disposition to talk, which is peculiar to the primary effects of ether, and while anæsthesia could be as quickly produced with ethyl as with chloroform, it did not last so long. I also observed in my own case, and in others, that there was more nausea and vomiting and headache when the ethyl was used, than with chloroform. I also used mixtures of ethyl and chloroform, but found in them no advantages over chloroform alone. I make the following objections to bromide of ethyl:

1st. It is no safer than chloroform.

2nd. I can produce anæsthesia as quickly with chloroform.

3rd. The same *degree* of anæsthesia does not endure so long as with chloroform.

4th. It produces more nausea, vomiting and headache than chloroform.

5th. The odor and taste is more unpleasant than that of chloroform.

6th. It possesses no advantages over chloroform in obstetrical practice.

7th. In prolonged obstetrical operations it is not so good as ether, because the anæsthetic effect is of short duration, and as a consequence requires to be continuously administered.

8th. For these reasons, I have abandoned the use of it.

Concerning priority in the use of bromide of ethyl in labor, Dr. E. E. Montgomery, in a supplement to a paper read by him before the Obstetrical Society of Philadelphia, and published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, of September 26, 1885, writes as follows:

"In following the German literature by which I was led to use this drug in labor, I ascribed its first obstetrical use to Lebert, of Paris. The first case in which he used it was for the application of forceps, and occurred in March, 1881, but a paper published by Dr. Turnbull, (*Med. Bulletin*, June, 1880,) shows that he had then used it in a second case of labor, and spoke in high terms of its peculiar advantages. Dr. H. Augustus Wilson had used it in labor prior to August 7, 1880, when he published an article on this drug. (*Medical and Surgical Reporter*, Aug. 7, 1880.)

"It becomes quite evident that the first obstetrical trial of this agent was made in this city, and the priority lies between the gentlemen named."

Now, accepting Dr. Montgomery's dates as correct, I lay claim to priority of use of the drug in obstetrical practice, by a year over Lebert, of Paris, and by months over Turnbull and Wilson, of Philadelphia. In a paper read by me at the Iowa State Medical Society (as already indicated) which convened at Des Moines on January 27, 1880, on "The Use of Anæsthetics in Labor," I suggested the use of bromide of ethyl for this purpose (see extract of paper published in *New York Med. Record*, February 21, 1880). The first case in which I employed the drug occurred on March 29, and the second case March 30, 1880, as my obstetrical memoranda, made in my "Visiting-list" for 1880, show. These facts, I believe, *clearly* leave with me and in the West thus far, the credit of priority of the use of bromide of ethyl in obstetrical practice, *instead of* at Paris or Philadelphia, or with the gentleman whom Dr. Montgomery unintentionally placed it.

204 E. Main St., September, 1885.

MEDICAL PROGRESS.

PILOCARPINE IN DATURA-POISONING.—DR. LADISLAS ROTH, of Nagy Bajour, Hungary, was called, at 1 P. M., to a little girl, aged 4, in a druggist's shop. She was quite insensible, with widely dilated and insensitive pupils, the face and body being swollen as if dropsical, and covered with a scarlatiniform rash. She was very restless, throwing herself about in all ways, groaning and gnashing her teeth; the pulse was 146, small and weak; the respirations forty, superficial, the temperature 39.5° Cent. (103.1° Fahr.). No urine or stool had passed since the commencement of the symptoms. The mother said that other children had told her that the child had eaten two handfuls of sweet ripe stramonium-fruit, and, when she saw her at eleven o'clock, she had seemed ill, and unable to stand on her feet. She had called the Government medical officer, who prescribed a mixture containing two grains and a quarter of tartar-emetic. The druggist, however, being of opinion that that would not do any good, took upon himself to give a solution of sulphate of copper instead. In the vomit which the copper had produced a number of berries of datura-stramonium were seen. Dr. Roth, remembering a case of atropine-poisoning he had seen reported by Professor Purjek, which had been cured by pilocarpine given subcutaneously, administered, at twelve o'clock, half a centigramme (one-fourteenth grain) of pilocarpine, in five centigrammes of water, by means of a Pravaz's syringe. No salivation or sweating followed, but no improvement was detected; and, at a quarter to three, a centigramme was given. The red rash and the swelling diminished. At three, another centigramme was given. The child cried, and shortly began to show various signs of improvement, even answering, "Yes," when the mother asked if she were ill. The injections were continued. Up to five o'clock, five and one-half centigrammes had been given. At six, the pupils had become almost normal, and the pulse 120, and temperature 39.8°. She was able to speak quite plainly, and wanted something to eat. All this time, there had been no sweating. At seven o'clock, as her condition appeared somewhat less satisfactory, half a centigramme more was given, and this brought on both salivation and sweating. She made a rapid recovery. Altogether, six centigrammes of hydrochlorate of pilocarpine were administered, five of which, the writer considers, were required to neutralize the datura.—*Brit. Med. Journ.*, Sept. 19, 1885.

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PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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MODESTY!

The *Medical News* and the *Record* are still laboring to make the professional world believe that there are no leading men in the profession of the United States except the twenty-eight in Philadelphia, the dozen in Baltimore, and the half dozen in New York who refused to accept positions in the International Medical Congress, "as then *proposed* to be organized," before the actual organization had been effected; and they are still publishing pretended declinations from the same "proposed" organization. The *News*, however, seems to be rapidly losing its interest in the whole subject, and in its last week's issue lugubriously expressed the hope that "the nation may be spared the disgrace" of having the Congress held in this country. Perhaps the fact that the unpatriotic conduct of that journal and its twenty-eight coadjutors has been openly condemned by one hundred and fifty of the leading members of the profession in its own city, and three or four hundred more in the State, is having something to do with its waning interest. And there is some reason to hope that its corps of editors will ere long actually discover that there is a medical profession in the United States outside of that editorial corps and its little coterie of favorites.

The *Record*, with still more remarkable modesty, openly declares "that there is no exaggeration in saying that there are not half a dozen representative men in the profession now who are prominently connected with the organization of the Congress." As Austin Flint, Sen., is President; W. O. Baldwin, H. I. Bowditch, Wm. Brodie, Henry F. Campbell, W. W. Dawson, R. Palmer Howard, E. M. Moore, T.G. Richardson, Lewis A. Sayre, and J. M. Toner, are among the Vice-Presidents; and Henry H. Smith, Wm. H. Pancoast, A. R. Robinson, Wm. T. Briggs, Joseph Jones and John P. Gray, are among the Presidents of Sections, the question will naturally arise in the mind of the reader whether there are any "*representative*" men in the profession of the United States in the estimation of the *Record* except its editor, George F. Shrady, A.M., M.D.

A week or two since, the editor of the same journal, in asserting its usual pretense that the action of the Committee of Arrangements was condemned by the whole profession and the medical press, actually named eighteen medical journals out of the one hundred or more published in the United States, that had sometime published expressions of disapproval of the action of the Committee of Arrangements. But to get even this relatively small number of journals, he had to include the *Chicago Journal and Examiner*, whose editor simply admitted in its columns that errors had been committed on both sides, but is himself an earnest supporter of the present Preliminary Organization of the Congress, and President of one of its Sections. While both the *News* and *Record* find plenty of space to copy from week to week, under the head of public sentiment, the comments of their little coterie of journalistic followers, neither of them has had the manliness to publish the official report of the proceedings of the Committee of Arrangements as finally adopted at the meeting in New York, so that their readers could read and judge for themselves concerning both the appropriateness of the Rules and the *personnel* of the Organization.

The truth is, that the Rules as finally adopted and the Organization for which they provide are free from every objection that had been urged against the previous work of the Committee, and further opposition can have no other basis than mere personal prejudice or the unpatriotic desire to drive out of the country whatever the opponents cannot personally control. But they may rest assured that further opposition on either basis will be unavailing. The Ninth International Medical Congress will be held in the City of Washington in 1887, and will be equal, in all its legitimate interests, to any of the Congresses that have preceded it.

BACTERIAL THERAPEUTICS.

The recent experiments of PROFESSOR CANTANI regarding the effect of administering, by inhalation, a spray of bacterium termo in a case of acute pulmonary phthisis seems to be a new proof of the truth of the adage "Set a thief to catch a thief," since these experiments seem to show quite conclusively

that the bacterium termo completely antagonises the bacillus of phthisis.

According to the *Centralblatt für die medicinischen Wissenschaften*, of July 18, 1885, quoted in the *Philadelphia Medical Times*, of August 8, a pure culture of bacterium termo was used, diluted with gelatin and meat-broth, by means of a hand spray apparatus with double rubber bulb. "The expectoration rapidly decreased, until it ceased entirely during the last few days of the experiment. The tubercle bacilli likewise soon diminished from (in?) the expectoration, and did not reappear, while bacterium termo became more and more abundant." The fever decreased very much during the last few days of the experiment, and the bodily weight was decidedly increased; in short, the patient was very much better. We are not told why the administration of the bacteria of decomposition was discontinued—nor are we informed as to the aroma of the patient's breath after having undergone this novel therapeusis for a month, though that may be left to the imagination.

The *Times* says, regarding this experiment, that it "satisfies the requirements of science, and apparently establishes it as a fact that the antagonism known to exist between the bacterium termo and the bacillus tuberculosis, may be used for therapeutic purposes *cito, tuto et jucunde*." To our mind it also establishes another fact, not required by science, that the bacillus tuberculosis is somewhat particular as to the company it keeps. And however much we may hereafter dread that bacillus, we must respect it for its aristocratic sentiments. Before fully recognizing it as belonging to the upper classes, however, it would be well to have some idea as to its behavior in the presence of Neisser's gonococcus and Lustgarten's bacillus; though this would not be an absolutely true index of its social standing, as these microbes move in the very best society.

The question which now arises is, Will the matter stop here; or is the time near at hand when the physician will relegate the prescription pad to the limbo of the forgotten, and make his daily rounds armed only with hand-spray apparatus with double rubber bulb, containing gelatin cultures of bacteria, labeled in proper order from abscess to zoster (and made by the improved process of some manufacturing chemist)? And if the usual number of "Physicians' Samples" are sent out, will not the doctor's office be somewhat more dangerous than a powder factory? The accidental introduction of the microbes of insomnia, into a foundling asylum, might be followed by most appalling consequences, unless the attendants were so fortunate as to be deaf. Far more dangerous than the doctor's office, however, will be the drug store (or, as it will then be called, the bacteria emporium); and it is quite probable that the manufacturing chemist will find it impossible to insure his life at any risk.

But perhaps there will now be a field of usefulness for the bacterial wealth which has been unused for several years, and to which additions are being constantly made. It is not improbable that Seifert's bacillus of influenza, the bacillus of mumps, and several other seemingly superfluous microbes will come prominently forwards as candidates for therapeutic honors. It is quite probable, also, that we may be able to exchange with the lower animals for some of their bacteria. Is it not possible that the cholera bacillus may be made to do duty as a physiological antagonist to foot-rot in sheep; or that the bacillus of hog-cholera may find a field of usefulness in combatting the ravages of chicken-pox? These are some of the questions almost necessarily suggested by Cantani's experiments. And it seems that when they are settled, the medical millenium will have certainly come—and cocaine will be cheap.

By referring to the abstract of Dr. S. K. Jackson's Address before the Medical Society of Virginia, (JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, October 3, p. 375), it will be seen that this plan of treatment was first suggested by him in September, 1883, at the meeting of the Medical Society of Virginia.

THE AMMONIA TREATMENT OF TYPHOID FEVER.

In a paper read at the meeting of the American Medical Association, in 1884, DR. S. K. JACKSON called attention to a line of treatment which he claims "has furnished results very different from the recorded experience of others; a treatment suggested by the recognition of several pathological conditions, which, though long since demonstrated, had been entirely ignored by the profession when looking for indications for treatment." Dr. Jackson has recently treated the subject more fully in an article in the *Physician's Magazine*, August, 1885.

As is well known, one of the most prominent pathological states in typhoid fever is the excessive nitrogenous waste of the system—which need not be discussed further than to say that the probable causative factors are an inability to digest nitrogenous food, due to a deficiency of the digestive fluids in typhoid fever, and the enormous consumption of the nitrogenous matter of the system by what we may designate as the probable parasitic organism of

the disease. "That this microzoön is a nitrogen-feeder, is evident from the fact that he lives and is enveloped in nitrogenous matters in urea and all nitrogenous excreta;" and further, "by the ammoniacal exhalations emitted by a typhoid fever patient, from the breath, the skin, as well as by the urine, which, when freely passed, as is known to all, emits the odor of ammonia.

In the opinion of our author, then, the most important therapeutic indication is to supply this nitrogenous waste. From the nature of the disease, however, this waste cannot be directly repaired by nitrogenous food; since, as has been shown, the glandular secretions which act on this food to render it digestible are at a stand-still. Even milk, the only natural food from which anything is to be expected, cannot be administered in sufficient quantities to supply the whole waste. We must therefore make use of some highly nitrogenized substance, which does not require digestion, but which is easily absorbed when taken into the system. This substance Dr. Jackson believes to be *ammonia*, preferably in the form of the doubly nitrogenized salt nitrate of ammonia, since it also acts as a sedative, and, what is especially important, according to Dr. Jackson, it has a remarkable power of reducing the temperature in typhoid fever. Why or how it reduces the temperature of enteric fever cannot be definitely stated; but he thinks that "it is by inhibiting the life-processes of the microbe, by saturating it with the products of its own life, thus either crippling its vitality or altogether destroying its life, on the principle enunciated by me several years ago: 'No organism can exist in its own excretions, the product of its life-processes.' Whatever may be its *modus operandi*, its effects are unquestionable."

The nitrate, however, is not the only salt of ammonia which may be used in typhoid fever. The nitrate is an efficient antipyretic, the acetate, which combines well with acetate of lead, the most valuable astringent in these cases, is somewhat astringent, and "the nervous stage is wonderfully modified by the carbonate" and the hydrochlorate is undoubtedly the most efficient of all drugs in the stage of coma. In these salts of ammonia, then, according to Dr. Jackson, we have a complete armamentarium for the medical treatment of enteric fever: at least, they are the main drugs to be depended upon, though turpentine is still acknowledged to be the most efficient remedy for meteorism, and acetate of lead, with acetate of ammonia, is to be administered in diarrhœa; though the acetate of ammonia alone may be sufficient. It need scarcely be said that the preliminary treatment of these cases, until the true nature of the disease is manifested, is still the same. The nitrate of ammonia may be given in doses of gr. vj every two hours, combined, if necessary, with aconite and spirits of nitrous ether. In diarrhœa the liquor ammoniæ acetatis may be given in doses of ʒj–ij every two hours, with or without turpentine or the lead salt. When nervous symptoms supervene, carbonate of ammonia may be given in gr. iij every hour or two, with an equal quantity of chlorate of potassium; and to this quinine may be added. For the stage of coma the muriate may be given in gr. iij doses, or more, every two hours, quinine being added if necessary.

In connection with the above may be mentioned Dr. Jackson's system of feeding enteric fever patients. So soon as the nature of the disease is apparent the patient is put upon an exclusive milk diet. Animal broths are never given until convalescence is fairly established. On account of the absence of the diastasic fluids, farinaceous or amylaceous foods are inadmissible, unless administered with a sufficient quantity of a reliable malt preparation, which would contain the amount of diastase necessary to convert the starch into dextrine and glucose. Even when the salivary fluids return, and amylaceous foods are again administered more freely, the malt should be continued. When the nervous stage or that of coma sets in, the diet may be more generous, and stimulants are admissible. The results obtained by Dr. Jackson are certainly sufficient ground for an extensive clinical study of his plan of treatment.

IS CRANIOTOMY UPON THE LIVING FŒTUS EVER JUSTIFIABLE?

A distinguished teacher of obstetrics, residing in Boston, was recently visited by a delegation of Roman Catholic priests. The priests were instructors in a large theological seminary. The object of their visit was to obtain knowledge of the present status of the operation of craniotomy upon the living fœtus.

Their attention had been called to the address of Dr. S. C. Busey, before the Washington Obstetrical and Gynæcological Society, and published in the *American Journal of Obstetrics*, February, 1884. Dr. Busey had unqualifiedly condemned craniotomy upon the living fœtus. Modern scientific investigation supported the famous dogma of the Roman church, authoritatively proclaimed by the Theological Faculty (of Paris) many years ago,—"If it is not possible to extract the infant without killing it, it is not possible to extract it without committing mortal

sin." The wisdom of the ancients was worthy of admiration.

Certain members of the Faculty of the Boston Theological Seminary, although familiar with the responsible character of the *American Journal of Obstetrics*, desired corroboratory testimony. Accordingly, they appealed to one of the instructors of the famous medical school of that city. It seems scarcely necessary to add that the obstetrician denounced in very emphatic terms Dr. Busey's paper as sensational and utterly fallacious.

In the paper we have mentioned, the question, "Is Craniotomy upon the Living Fœtus a Justifiable Operation?" is discussed and decided in the negative in a manner that excited much surprise and positive displeasure when it was published. General inaccuracy of statement, the omission of recent statistics, the frequent recurrence of logical fallacies in the premises, conclusions, and order of the argument at once condemned the essay in the eyes of the scientific medical world.

Dr. Theophilus Parvin, of Philadelphia, called attention to many glaring inaccuracies in an editorial, which appeared in the *Medical News*, March 29, 1884. Dr. W. W. Jaggard, of Chicago, published a systematic criticism in the *American Journal of Obstetrics*, November, 1884. Dr. Robert B. Dixon, of Boston, read a paper upon the same subject, April 15, 1885, before the Section of Obstetrics and Gynæcology of the Suffolk District Medical Society, which was published in the *Boston Medical and Surgical Journal*, September 17, 1885. Dr. Dixon's paper was ably discussed by Dr. Benjamin Cushing, Dr. A. D. Sinclair, Dr. Fifield, Dr. Reynolds, Dr. Wm. L. Richardson, Dr. Green, and Dr. Lyman, who entirely agreed with the strictures upon Dr. Busey's paper.

Notwithstanding this accumulation of evidence, we find the errors inculcated by Dr. Busey's sensational address still persisting, and liable to be perpetuated as an integral portion of the dogmatic theology of the Roman church.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF VIRGINIA.

Sixteenth Annual Session, held September 15, 16 and 17, 1885.

(*Continued from page 355.*)

EVENING SESSION.

The evening session was opened with a paper by DR. BEDFORD BROWN, of Alexandria, Va., in continuation of the subject of *Scarlet Fever*. A high temperature, a frequent pulse and excessive cervical adenitis must first claim attention. He has seen some malignant cases with cold extremities and tongue with a body temperature of 107°. Salicylic acid combined with tincture of aconite and infusion of digitalis diminish fever more decidedly than any other antipyretics. He uses the following:

℞

Acid. Salicyl.	ʒij
Tinct. Aconit. Radicis.	gtt. xij
Infus. Digitalis.	℥iss
Spts. Ammon. Arom.	ʒiij
Syr. Aurant. Corticis.	℥ss
Aquæ	℥i

M. S: Teaspoonful for a child 5 years old every three hours.

This combination acts also as a diaphoretic, and favorably influences the kidney functions. Its action may be increased by the tepid bath or wet pack. He has observed marked benefit from alcoholic stimulants in malignant cases tending to collapse and coma, and in cases, on the other hand, of high fever, rapid pulse and extreme restlessness. These agents also generally prevent adenitis. In dangerous cases, the frequent use of baths is attended with exhaustion. In scarlet fever, tending to extensive suppuration and pyæmia, tincture of iron, Fowler's solution and quinia sulphate are the best agents. To relieve acute nephritis and renal dropsy, enveloping the body with a flaxseed meal poultice, covered with oil silk answers well. When the kidneys are engorged, the urine bloody, with dropsy of the chest and abdomen, a full dose of calomel followed by compound powder of jalap will often do good. Such cases bear purgation better than almost any other. But if the renal dropsy is attended with a cool skin, great pallor of complexion, feeble pulse and great general prostration, then frequent purgation is not well borne. In such cases, use lumbar poultices, digitalis, acetate of potash and tartrate of iron and potash, with occasional saline cathartics. There is a morbid element in scarlatina which often develops well marked rheumatism; hence the frequent cardiac complications. When these threaten or occur, resort to the active agents named in the prescription above given. The alkalies and salines should enter into the therapeusis of the renal complications. Dr. Brown has been disappointed with the diaphoretic action of pilocarpin in scarlet fever. Iodide of potash is often a useful medicine in the nephritic sequelæ of scarlatina.

DR. R. I. HICKS, of Casanova, Va., said he had treated a great number of cases of scarlet fever in his thirty years of practice, but had never seen anything denoting kinship between scarlet fever and diphtheria, nor had he seen scarlatinal throat complications threaten life. Simple hot water throat-mopping or gargling will relieve that. He thinks the best plan of treatment consists in cold sponging of the body, and the use of quinine and of carbolate of iodine in small doses internally. He lays great stress upon the surroundings of the patient under treatment. Everything should be kept clean, and a current of fresh air should be kept up about the bed. If the bed is behind the door, or in a corner of the

room where there is no circulation of air, pull it out to the middle of the room, and keep the windows open. When the weather is very cold, use rooms where there is an open fire place. He believes that malignancy depends upon bad sanitation. Zymotic germs do not live in pure air. Filth breeds them. He thinks salicylate of soda irritates the stomach too much, and corrosive sublimate in doses large enough to kill germs kills the patient.

Dr. Alex. Harris, of Jeffersonton, Va., wished to emphasize (1) the benefit of isolation, both as a preventive and as a curative measure; (2) sick rooms with open fire-places; (3) position of bed out from the walls—not in a corner of the room and draughts of fresh air passing through the room. The clothing of patient and bed should be changed daily. He mentioned a striking case in which a patient almost in collapse was restored in a half hour from a suffocative condition to one of easy breathing, simply by clearing the room of everything except the bed, which was placed in the middle of the room, bedding and patients clothing changed, and currents of fresh air made to ventilate the room. (4) Popular disinfectants are generally not useful in permissible doses. Fire or water above 212° are germicides. Hence, burn or boil whatever clothing has been used about the patient. (5) Always disinfect a house in which a zymotic disease has been treated. Scarlet fever has been traced to a house in which it was a year or more previous. Pour boiling water all over the floors, in the cracks, on the walls, etc. Doubtless steam would do better.

Dr. C. T. Lewis, of Clifton Forge, Va., said he knew of cases where one child had scarlet fever severely, and the other children were continuously with him yet without contracting the disease. He believes in the stimulating plan of treatment, and thinks digitalis helps to relieve the swelling of the throat. Sometimes he uses chlorate of potash and muriated tincture of iron. He is a great advocate of such sanitary measures as Dr. Harris has just named, and he feeds liberally.

Dr. John F. Winn, of Richmond, agreed with the speakers as to their sanitary injunctions. He thought that in towns particularly, placards should be placed on the doors of houses where there are cases of scarlet fever so as to warn off any who might innocently go into the house with the disease. Again, funerals spread the disease. He thought public funerals in all cases of death by zymotic disease should be prohibited by law. In regard to the bedding, etc., use old cloths, etc., and as soon as removed or used, throw them in the fire. The popular "disinfectant" solution of copperas is not a disinfectant, but is antiseptic. Four ounces of chloride of lime dissolved in a gallon of water is a good preparation to pour upon the evacuations of typhoid patients. Corrosive sublimate in solution is also used. Let all articles to be used again be kept immersed in one or the other of these solutions for several hours. To disinfect a room, burn from two to four pounds of common sulphur for a day in it, with closed doors. The body, after death, if to be moved, should be kept wrapped in cloths wet with Labarraque's solution, ℥iv to the gallon.

Dr. L. Lankford, of Bowers, Va., also agreed with Dr. Harris and Hicks as to fresh air in the treatment of scarlet fever, and thought malignancy would be rare if this was more insisted upon than it is. As an illustration, he mentioned the cases of his two children. The younger was kept down stairs in a warm room and malignancy developed; the other child was kept up stairs, where there was no fire, and where a window was kept open, and had no malignant symptom or sign. The weather was cold.

Honorary Fellow, Dr. J. Herbert Claiborne, of Petersburg, Va., spoke of a case in which the dermic inflammation was so intense that, on the third day, the skin came off in large patches all over the body. Some children played day after day in the room with the patient, and yet none of them contracted the disease. Shortly afterwards, some other children had the fever so mildly that they even went out of doors, and soon cases developed in their playmates. An old lady living in the house with these mild cases had scarlet fever so badly that she came near dying. To disinfect a sick room, not only the organic germs must be destroyed, but the spores also. A solution of corrosive sublimate (1:1000) is required to kill the spores, or water at 280°. But the best disinfectant for a sick room is pure fresh air; the doors and windows should be left open. Of course, always disinfect articles of clothing, etc. He thinks that Squibb's solution of chlorinated soda —℥ij to the gallon—is the most perfect insecticide in the market, and it is cheap enough to be in the reach of all.

Dr. Wm. L. Robinson, of Danville, Va., believes a great deal of good results from proper medicinal treatment He brings down the fever by using a full bath at 95° which he allows to cool down to 85° while the patient is in it. Before taking him out of the bath, give a weak toddy, and rub the surface of the body over with camphorated oil. He also depends much upon the free use of lithia water. If the nose gets stopped up so as to cause mouth breathing, the child often wakes from cat-naps with screams. For this condition, he uses steam atomizer with chloral-hydrate—two grains in an ounce of water. This keeps the nose moist. Large doses of calomel and jalap should be used if kidney complications supervene. In one case of œdema of the lungs, pilocarpin hypodermically saved the patient.

Dr. Winn stated that a correspondent, in the Journal of the American Medical Association, places patients sick with diphtheria on house-tops or on the porches, and says that all get well. The more fresh air, the better are the results of treatment.

Dr. W. W. Parker, of Richmond, Va., has often been disheartened at the results of treatment of scarlet fever. Many cases get well, it is true, without any medical treatment, but formerly other cases did not get well under any plan of treatment. Now he has good results, and he thinks the best remedy for bad cases is alcohol in free doses. He wants his patients kept hot. He got his suggestion from the good effects of alcohol in typhoid fever. For the sore throat, applications of turpentine are as good as carbolic acid. Keep the child in the house accord-

ing to the weather. In ten days in the summer, the patient may go out; but in winter, wait until three or four weeks have elapsed

DR. M. A. WILSON, of New River Depot, Va., has used Bartholow's prescription of tincture of belladonna to antagonize that condition of the throat which causes exudation, with great satisfaction.

DR. HUGH T. NELSON, of Charlottsville, Va., agreed with Dr. Parker and others that many cases get well without any treatment. He had known children without the eruption but with scarlatinal nephritis to spread the disease. Hence, during an epidemic, keep children more or less separated from intercourse with each other. Patients often succumb to accumulation of heat around the nerve centres; hence, the necessity for diaphoretics and heart stimulants. After these, use tonics. The objects of treatment are to cause elimination of heat, and to quiet the heart.

DR. SAM'L K. JACKSON, of Norfolk, Va., said that the common practice in his city is to use the chlorine treatment of Watson, as described in his work on "Practice of Physic."

MR. J. W. THOMAS, Jr., of Norkfolk, Va., stated that Watson's chlorine mixture is as follows:

℞

Potass. chlorat..... ʒij
Acid hydrochloric Aquæ.....aa f. ʒij

M. Keep in a dark bottle loosely stopped until effervescence had ceased. Then

℞

Watson's chlorine mixture..... ʒij
Water..... f. ʒiv

M. Ten grains of chlorate of potash may be added if desired.

DR. ROBERT S. LEWIS, of Culpeper, Va., has always used Watson's chlorine treatment with success.

DR. WM. L. BROADDUS, of Newtown, Va., confirms the statements made about Watson's chlorine treatment. He has used it especially in diphtheria, which, he thinks is related to scarlet fever. Of eight cases in which he made tests, he used the chlorine treatment in seven cases, and they recovered; one case in which he used another plan of treatment died.

DR. JOHN GRAMMER, of Halifax C. H., Va., uses Watson's chlorine treatment, and thinks well of it in scarlet fever. It is important to attend to the secretions, and therefore he uses calomel and inunctions, which generally act promptly.

DR. W. D. COOPER, of Morrisville, Va., testified to the value of the chlorine treatment—both internally and externally.

WEDNESDAY—AFTERNOON SESSION.

DR. HUNTER MCGUIRE, of Richmond, exhibited a case of

COXALGIA, AMYLOID LIVER, AND POTT'S DISEASE.

The patient was a boy, aged seven years. Three years ago he had hip-joint disease, and the head of the femur was removed by Dr. L. A. Sayre, of New York. Some carious bone was left, and the sinuses remained and continued to discharge. When Dr. McGuire first saw him the discharge amounted to eight to ten ounces of pus per day. With this condition there were symptoms of amyloid degeneration of the liver. The patient was put on bichloride of mercury, and the liver was diminished fully one-half, so that there are some doubts as to whether there was any amyloid degeneration, as this has hitherto been supposed to be an incurable condition. The discharge from the sinuses at the hip-joint amounts now to about ʒss of pus a day. The most interesting feature of the case now is the fact that the patient has developed Pott's disease. For three years this patient has been on his back, nursed most carefully and skilfully, with absolutely no chance for any injury to the spine, and yet he has developed Pott's disease solely from his hereditary constitutional vice, which completely disproves the teachings of some most eminent surgeons.

DR. MCGUIRE also exhibited a case of

OBSCURE PELVIC TUMOR—INFLAMMATORY EXUDATION, THREATENED SUPPURATION, OR SARCOMA?

The patient was a physician, Dr. F., who, nine months ago, after becoming much exhausted, had symptoms of local peritonitis in the cæcal region, the sequel to which was a lump in the left inguinal region, external to the bowel. The patient suffers greatly from constipation, and from pain after an operation from the bowels.

The tumor is now quite large, and by pressure on the iliac artery interferes with the circulation. The outline of the tumor is easily made out along the crest of the ileum, while its lower border is at Poupart's ligament. There have never been any signs of intestitial obstruction. The patient has not the appearance of a person suffering from cancer, and there is no lymphatic involvement whatever in the inguinal or any other region; nor has the patient had any of the sharp lancinating pains of cancer. There has never been any sign of intestinal obstruction. It is possible that the tumor may be due to inflammatory exudation at the time of the local peritonitis; or it may be due to threatened suppuration, since Dr. McGuire is certain that he has detected fluctuation, though two other surgeons have failed to detect it. Should it not be one of these conditions it seems almost certain that it must be a sarcomatous growth.

DR. M. G. ELLZEY, of Washington, D. C., presented the

REPORT ON CHEMISTRY, MATERIA MEDICA AND THERAPEUTICS.

He said that *Chemistry*, as a science, is approaching the exactness of completion. As a practical art, it is making rapid and brilliant advances. The teaching of the elements of general chemistry should be relegated to the primary schools; in medical colleges medical chemistry as applied in practical medicine and surgery should be taught.

In *Materia Medica and Therapeutics*, interest has recently centred around two drugs mainly, viz:—cocaine and antipyrin. Medical antipyretics have, however, proven slightly disappointing. The evidence is a temperature may be reduced without benefitting the disorder, or even at times resulting in mischief. The true place of *antipyrin* can scarcely

yet be assigned. Attempts to enrich materia medica by an attenuated cholera virus for inoculation have proven abortive. Germs and germicides have continued to attract unabated interest. The results of Dr. Sternberg's studies, now before the public, are of much value. Our germicidal doings have sometimes proven homicidal. Eminent men have destroyed their patients with corrosive sublimate, but their eminence does not relieve them from criminal responsibility for these fatal poisonings. Climatological therapeutics have been recently studied afresh. Appalachian Virginia is a vast summer sanitarium. The subject needs more complete study.

Dr. Smelt W. Dickinson, of Marion, Chairman of the Section, presented the

REPORT ON ADVANCES IN OBSTETRICS, AND DISEASES OF WOMEN AND CHILDREN.

As to *Antiseptic Midwifery*, he said, there can be no doubt that many lives have been saved by greater cleanliness since the agitation of this subject began. Modifications of obstetric antiseptic rules of a year ago have been made, such as doing away with or lessening the frequency of vaginal and intra-uterine injections. While mercuric bichloride is our best germicide, its use is more or less dangerous, especially when nephritis is suspected. But antiseptic cleanliness of all things entering the puerperal vagina or womb—such as hands, sponges, instruments, etc.—is all-important. Lying-in chambers should be kept aseptic. Cushings and other prophyctic systems are then described, first through bathing and then douching the vagina *ante-partum* with very weak solutions of corrosive sublimate, and then washing out the uterus with a like solution after delivery of the placenta or instrumental labor. The doctor's and nurse's hands are kept asepticised all the time.

Post-partum drainage is best effected by letting the patient sit up on the chamber vessel when she wishes to urinate or have an action from the bowels, provided, of course, the condition of the patient permits it.

The *contagium of puerperal fever* seems to be of a material character, capable of being acted upon, and either destroyed or washed away by vaginal or intra-uterine injections holding antiseptics in solution. If the temperature rises above 100° after delivery, without other assignable cause, and the lochia become offensive, use antiseptic injections at once. After the doctor has thoroughly disinfected himself, he may return immediately to obstetric or surgical work.

Extra-uterine pregnancy is now treated by electricity to kill the fœtus, with a subsequent resort to laparotomy to remove it.

Combined version in placenta prævia consists in tamponing the vagina and anæthetize the patient. After sufficient dilatability of the vagina is secured, remove tampon, introduce hand and carry two fingers into the cervix uteri. Push fingers through the presenting placenta, draw the presenting part of the fœtus to one side, and at the same time let the other hand on the belly press from without so as to carry the buttocks down until a foot can be reached; draw the foot through the cervix so that the breech may act as a tampon on the lower segment of the uterus. Then wait for the spontaneous expulsion of the child, or, at least, for sufficient dilatation of the cervix to complete delivery.

As to *treatment of the cord*, Dr. Christopher Tompkins, of Richmond, recommends that the cord be drawn between the fingers until some of the gelatinous matter is expressed, and then tie as usual, except a third ligament is applied near the one left on the umbilical cord. Credé and Weber use absorbent cotton as a daily dressing for the cord instead of cloths, to prevent umbilical inflammation.

Ethyl bromide promises well as an obstetric anæsthetic. Cocaine is *sub judice*, with chances against its general adoption. The forceps cannot be supplanted. Abortion is generally advocated in dangerous placenta prævia, puerperal nephritis, and uncontrollable risky vomiting of pregnancy. Well-regulated temperature of lying-in room is essential to the life especially of premature feeble children. Swinging as a substitute for artificial respiration is urged by some.

As to *Diseases of Women*, *neurasthenia* is the most prominent. A common error is the mistaking of nervous disease for womb disease. Neurasthenia, according to Mitchell, is generally associated with anæmia, and is chiefly reflex in its manifestations. Rest, massage, electricity, and forced feeding are the essentials of treatment.

Laceration of the cervix uteri will heal without an untoward symptom if blood-poisoning be prevented. Always treat the cellulitis before using any operative measures.

Alexander's operation for backward uterine displacements consists in cutting over and down to the external inguinal ring, gathering up the ends of the round ligaments and drawing them sufficiently out to restore the womb to its normal position. Then stitch the ligaments to the edge of the ring, and cut off about an inch of the end. Drawing too much on the ligament has caused death. Wear a pessary for two months after the operation. Prolapse of both ovaries into Douglas' cul-de-sac, with consequent sterility, may be cured by this operation.

Dr. Goodell advises *rapid dilatation of the cervix for dysmenorrhœa*. It is better than the cutting operation, especially for dysmenorrhœa of mechanical origin, as well as for nervous dysmenorrhœa.

As to *Diseases of Children*, carbonate of ammonia in scarlet fever is gaining favor—large doses. Dr. R. D. Huffard, of Smythe Co., Va., uses the carbonate later in the disease, when the capillary circulation is languid. Subnitrate of bismuth powdered over the sore tongue, which usually appears about the fifth day, acts well, as it does also in cancrum oris. Trypsin as a solvent for diphtheritic membrane is a success. Use it as a spray every fifteen minutes if the patient's strength will permit. Chlorate of potassium is to be avoided in febrile affections where the blood is alkaline, and is condemned in diphtheria and in nephritic diseases causing scanty urine, uræmia, and the like. *Icterus neonatorium* is supposed now to be due to the potency, to a greater

or less extent, of the ductus venosus. Dr. Hartigan, of Washington, D. C., supports the theory advanced in 1848 by Dr. Marion Sims, that the *cause of trismus nascentium* is "an inward displacement of the occipital bone."

THURSDAY, SEPTEMBER 17—THIRD DAY.

DR. R. T. STYLL, of Richmond, presented the

TREASURER'S REPORT,

showing a balance in the treasury of $390.55 after all expenses are paid.

A sum not exceeding $100 was voted to be used, if necessary, to retain legal counsel in case the State Board of Medical Examiners is sued, as threatened by a complainant who did not succeed in passing his examination before the Board.

DR. W. D. TURNER, of Fergusson's Wharf, from the Committee on Regulating the Practice of Pharmacy, reported favorably as to the petition for the enactment of a bill to regulate the practice of Pharmacy.

DR. BEDFORD BROWN, of Alexandria, read a paper on

THE SUCCESSFUL TREATMENT OF LACERATIONS AND FISSURES OF THE CERVIX UTERI OF LONG STANDING, WITHOUT SURGICAL OPERATION.

(For an abstract of which see p. 400.)

Honorary Fellow, DR. GEORGE T. HARRISON, of New York City, then read a paper on

PUERPERAL SEPTICÆMIA, ESPECIALLY WITH REGARD TO PROPHYLAXIS AND ETIOLOGY.

Due credit is given to the labors of Semmelweiss for his valuable investigations which pointed out the right road to the study of puerperal fever. He showed that child-bed fever was a disease that comes from without. Without a wound somewhere along the genital tract puerperal septicæmia does not exist. After expulsion of the child and secundines in labor, the entire inner surface of the uterus is laid bare like a part of the skin deprived of its epidermis by a blister. With this fact, it is only necessary to call to mind the possibility of very rapid absorption of septic matters introduced into the vagina or the uterus In primiparæ always, and in multiparæ generally, there are tears in the cervix, vagina or vulva, and often lacerations or contusions of the perineum, etc. If a puerperal wound were protracted from external influences, it would heal like a wound on the surface of the body. But putrefactive organisms can develop in the living organism wherever dead tissues or fluids (as extravasated blood) are found, while the healthy physiological tissue in general opposes a considerable resistance to their multiplication. On the other hand, other pathogenic (disease-generating) micro-parasites find, in the living tissues within the cells, in the blood, in the lymph sinuses, etc., the most favorable condition for development and multiplication. These fungi endowed with specific powers, are entirely different from the putrefactive organisms, and are destroyed by the latter. In puerperal fever, the carriers of infection are either the pathogenous fungi, which generate traumatic diphtheritis, pyæmia and septicæmia, or they are putrefactive germs. The latter are ubiquitous; the former are imported, and get to the puerperal woman by the hands, instruments, cloths, etc., that may be used about her genitals, They are derived from suppurating surgical wounds, cadaveric poisons and especially lochial discharges of women suffering with septic infection. A minimum quantity infects in the most effective manner.

The lochial discharges of puerperal sick *during an epidemic* are so infectious that they endanger life, by infection, of the non-puerperal woman, of the pregnant, of physicians and gynæcological cases where operations have been performed. In the puerperal woman, the conditions for the rapid development of the pathogenous fungi are most favorable. Contrary to general opinion, Gusserow has shown that there is no connection between puerperal sepsis and erysipelas, and that the micrococci of erysipelas cannot produce pathological changes identical with septic processes. The pathogenic fungi affect the organism immediately, while putrefactive germs do so indirectly by their influence on decomposable matters, always present in puerperal women. An autogenous or autochthonous infection is an impossible thing. The characteristic features of non-pathogenous infection are (1) the late appearance of the fever; (2) the slight participation of the general condition, and (3) the existence of local morbid substrata.

The principles of prophylactic treatment consist in pure air for the lying-in woman, the careful avoidance of introduction of infectious matter into the genital passages, and the thorough disinfection of the genital tract. The physician's and midwife's hands, instruments, etc., should be disinfected before using about a puerperal woman. Disinfection must be both mechanical and chemical. Use the finger-nail brush, after thoroughly washing the hands with soft soap, and then wash the hands again. Take off the coat and roll up shirt sleeves. Then dip the hands and fore-arms in a disinfectant solution. Instruments and cloths should be dipped in such a 5 per cent. solution of carbolic acid for several minutes. During the pregnancy—especially if there be any puerperal fever epidemic—the woman should frequently wash her external genitals with soap and water and afterwards with boracic acid solutions. When labor sets in, Dr. Thomas advises her to use a warm vaginal injection of antiseptic character, but Dr. Harrison protests against this injunction, under ordinary circumstances, as such injections are unnecessary and fraught with danger. They remove the mucus which renders the vagina soft and pliable, and most of the disinfectants used, especially carbolic acid and mercuric bichloride, coagulate the mucus and irritate the surface of the vagina. The bacteria naturally found in the vagina are not dangerous. But if the patient has been subjected to the possibility of septic infection during the birth, then it would be eminently proper to use a copious antiseptic vaginal douche immediately after the birth and during the rest of the puerperal state. In tedious and complicated labors, where frequent examinations have to be made or instruments used, injections are absolutely indicated. Sometimes putre-

factive decomposition of the uterine secretions occurs before labor ends. In such cases, complete the labor as speedily as possible, and thoroughly disinfect the genital tract by intra-uterine injections of carbolic acid or mercuric bichloride. Wash the external genitals three or four times daily, and disinfect once a day by carbolic acid or mercuric chloride solution. Close all lacerations of the perineum and vagina under strict antiseptic precautions, as by the continuous catgut suture. Iodoform dusted over the raw surface favors union. A powerful contraction and retraction of the uterus greatly helps in securing immunity from invasion of putrefactive bacteria; hence the value of Crede's method in expelling the placenta.

Dr. H. Grey Latham, of Lynchburg, presented the

REPORT ON ADVANCES IN SURGERY.

The report gave a running sketch of the discussion before the American Surgical Association on the "field and limitation of operative surgery of the human brain;" disapproved of extirpation of the larynx and trachea; spoke favorably of drainage of the lung for gangrene, etc.; and mentioned that laparotomies for many purposes are now established operations, as for strictures of the intestines, strangulations, excisions of organs non-essential to life, etc. Do not wait too long in strangulations of the bowels. Operate as soon as diagnosis of strangulation is clear. Operate as soon as vomiting sets in. Cut down so as to get at the cæcum. If this is distended, the cause of obstruction is below; if it be collapsed or not tense, the obstruction is above. If the strangulated coil of bowel is found to be gangrenous, the gut should be resected, and an artificial anus established. When laparotomy is rejected, adopt Nélaton's operation of enterotomy, performed in the right iliac fossa. Dr. Latham lays down as propositions, 1st, that the best guide to the seat of an obstruction is not manual exploration, but visual examination, assisted, if necessary, by extrusion of the bowel; and, 2d, no case of operation for intestinal obstruction is properly concluded until over-distended bowels are relieved of their contents.

The latest *operations for hernia*, obliteration of the sac or closing the neck are the guiding points, and invagination has been laid aside or neglected. *Digital dilatation of the pylorus* has been performed successfully for chronic non-malignant stricture. Make an incision in the stomach, introduce a finger through the opening and forcibly distend the stricture. In *operative treatment of a rectal cancer*, the following are said to be reliable guides:

1. If the finger cannot be passed beyond the disease, unless it is confined to the posterior wall, do not operate.

2. The growth can be removed at a somewhat greater height when the disease is confined to the posterior wall.

3. If, when the finger has passed beyond the disease, the bowel is movable on the adjacent structure, generally speaking, the growth has not extended beyond the rectal walls and the case is suitable for operation; but if the bowel feels hard, rigid, and firmly bound to the surrounding organs, the case is unfavorable for an operation.

4. Examine carefully the abdominal viscera, and if secondary deposits be suspected in the liver, no operation should be performed.

Dr. Rives Tatum, of Harrisonburg, Va., presented the report on

ADVANCES IN PRACTICE OF MEDICINE.

He called attention to the prevalence of cholera in Spain, and to the methods of Dr. Ferran for its prevention by inoculation. His methods, however, had been pronounced uncertain, and did not prevent an attack of cholera. Also that an attack of cholera did not prevent a subsequent attack. The local anæsthetic cocaine, that has lately come into such great prominence as an alleviator of pain, was referred to, and its use in the treatment of coryza, hay fever, and fissured nipple, was specially mentioned. Attention was called to the *ammonia treatment of typhoid fever*, as advocated by Dr. S. K. Jackson, of Norfolk, Va. Also to the mercurial treatment of typhoid fever and diphtheria, and the reduction of mortality in both diseases. The *unity of tuberculosis and scrofula* was referred to, and the increase of the former and diminution of the latter trouble were dwelt upon. Mention was also made of the exceeding rarity of idiopathic peritonitis, and it was said that peritonitis now is generally regarded as a symptom of some change of organic structure, and that its treatment should be prompt and radical. In nervous troubles, attention was called to the curability of many obscure diseases heretofore thought to be incurable. Eighty-five per cent. of cases of locomotor ataxia are of syphilitic origin, and frequently curable.

The report further called attention to the existence of sugar in the blood of carcinomatous patients, and peptone in sarcoma, and to the great aid these things will be in diagnosticating internal tumors.

CLINICAL NOTES ON CARCINOMATOUS AFFECTIONS OF THE DIGESTIVE ORGANS—THE UNRELIABILITY OF GASTRIC SYMPTOMS AS EVIDENCES OF GASTRIC PATHOLOGY,

was the title of a paper by Dr. R. C. Powell, of Alexandria, Va. He first gave a description of carcinoma, *clinically considered*, and reported several cases showing the obscurity of diagnosis. The cases illustrate two points of diagnostic importance: (1), unreliability of gastric symptoms as evidences of gastric disease; and (2), the great value of cachexia as corroborative evidence of malignant disease. Dr. Powell regards the cachexia as a more certain sign of cancer than the presence of a tumor. As to treatment, the indications are to sustain strength and to relieve pain. A judicious selection of food is necessary if the stomach be involved. Fatty, saccharine and starchy food are digested chiefly in the intestines, and these are best when the stomach is diseased. If the pancreas is the diseased organ, give meats, albumenoid substances, milk, etc., which are digested in the stomach; but let all food be pancreatized before it is used. If the liver is the diseased organ, allow both meat and fish, but not salted nor

highly seasoned. Salt water fish are believed to be best. Fruit and vegetables—raw or cooked, as preferred—are allowable. Permit "amusement without excitement, exercise without fatigue, and nutrition without stimulation." To relieve pain and procure sleep, use opium or morphia. Fowler's solution, combined with bichloride of mercury; carbolic acid and tincture of iodine—one drop each—and bismuth subnitrate, are the commonly used medicines. When bismuth is combined with atropia, it is useful in the salivation of cancer. Cundurango and Chian turpentine have passed into oblivion, and alveloz will soon also be forgotten.

DR. M. A. RUST, of Richmond, read a paper on

THE ETIOLOGY OF ZYMOTIC DISEASES.

He commenced with the evolutionary history of bacteria from their discovery by Leeuwenhock, 1682, to the present time. The germ theory was evolved from the fermentation theory—the morbid process of zymotic diseases being regarded as analogous to fermentation—the contagium playing the rôle of the leaven, exciting fermentation in the blood and humors of the body. When Liebig appeared with his fascinating physico-chemical fermentation theory, his application of it to explain the morbid process of zymotic diseases was generally accepted, and for a long time, *his* theory kept the yeast plant, which, since its first discovery by Leeuwenhock, had been repeatedly discovered, forgotten and rediscovered, in the background. When, finally, mainly through the efforts of Pasteur, the yeast plant was universally recognized, the medical mind, dropping Liebig's theory, came to the conclusion that, if the active principle of fermentation be a living organism, the contagium of zymotic diseases must also be living matter. Thus the germ theory was ready to spring into life; its way could never have been paved by practical medicine or clinical observations; the pathfinders were botanists, biologists, etc., who, by their researches and experimental studies concerning the etiology of certain epidemic diseases amongst plants and insects, disclosed in every instance, as incontrovertible and primary cause of the disease, the action of a low form of life. Dr. Rust then gave a detailed description of the silkworm plague and its stay by Pasteur. It now stood clear before the minds of the young medical generation that similar organisms must be found as primary cause of the infectious diseases of mammalia, man included. And they were found at first, perhaps, in too great redundance for the credit of the theory.

Dr. Rust divided microbes into three classes: those which are undoubted; those of questionable character; and those whose existence is placed by induction and analogy almost beyond doubt. The rapid progress made within the last decennium justifies the hope that all remaining obscurities as to the relation between microbes and disease will soon be elucidated. After this, however, there still remain three perplexing questions.

1st. Whence come these numerous species of microbes? The view hitherto entertained, that microbes or germs are held in suspense by the air we inhale, or by the water we drink, Dr. Rust thinks to be fallacious. Any substance present in the air of a locality must have its source in the soil, or emanate from an object on the soil whence it is continually renewed; and what the water contains in solution or suspension is also derived from the surrounding soil or has found its way into it from without. The soil, from the surface down to a considerable depth, is the habitat of the bacteria, whence they arise in the form of the finest dust. Not from the streets of our overfilled cities (provided they are broad enough to give free access to sunshine) rises this dust; it rises from the soil into our crowded, unventilated houses as the smoke from the hearth is drawn up into the chimney. No amount of sanitary measures hitherto devised will save a densely populated city from dying out in two or three generations (unless filled up by immigration), so long as the modern architect is allowed full sway. Dr. R. discusses the various views advanced concerning the transmutability of bacteria—the change from the specific into the non-specific form and *vice versa*—and holds that our present state of knowledge admits neither affirmation nor denial.

The second proposition is: How does the morbid process of bacterial disease ever come to a happy end? Since the development of the germ theory we have arrived at the perception that we have to reckon with two factors—the cellular resisting power on the one hand; the degree of virulence and the numbers of the invading microbes on the other. The numbers are of the greatest importance. If a few microbes were sufficient to generate disease, what would happen to the doctors who are daily and hourly exposed to their onslaught? Infection or immunity, abortive or fully developed form of the disease, recovery or fatal end, are the resultants of the correlation between cellular resisting power and the intensity and numerosity of the invading microbes.

But how shall we physiologically conceive this cellular resisting power? On this point we are still in the dark—a gleam of light is, however, dawning in the distance. The white corpuscles, leucocytes or migratory cells, which circulate in the blood, are to be met with in every multi-cellular organism, constituting the blood of the white-blooded animals, and being present in the tissues of the lower animals which have no vascular system—these leucocytes, identical with the amœba found in all stagnant waters, have formed the object of the particular studies made by Dr. Metschnikoff, of Odessa. He could only make his experiments on animals (bipinaria asteridæ, etc.), which are of such exquisite transparency that all occurrences within the living animal can be accurately observed from without. Just as we see the amœba eating under the microscope, Metschnikoff could observe through the transparent teguments of these animals the leucocytes eat up all foreign bodies. It seems that by the division of labor in the multicellular organism, these leucocytes (which Metschnikoff has named phagocytes, eating cells) have assumed the task of eating up all heterogeneous and waste matter and eliminating what they cannot digest. The question now arises whether the phagocytes, if they eat up all foreign bodies, could not likewise eat

up intrusive microbes? The experiments hitherto made by Metschnikoff seem to answer us in the affirmative, and should these experiments and observations prove conclusive, recovery or fatal end of the disease will depend on the proportion between the number of the phagocytes and the number of the microbes. The impenetrable mystery of the cellular resisting power will have resolved itself into a prosaic, tangible eating power.

The third question is: "How is immunity affected through vaccination?" There are numbers of untenable explanatory theories in the field. Instead of descanting upon them, as was his intention, Dr. R. refers to the exhaustive criticism of these theories by Dr. Sternberg, U. S. A., which appeared in the *London Lancet*, June, 1885. In his explanation of immunity, Dr. Sternberg rightly assigns the first rank to vital power—but the causative relation of vaccination to immunity still remains unexplained.

Will Metschnikoff's eating cells bring a solution? Minds prone to speculation might, even at this early hour, be led to advance the following theory: that the first meal of microbes eaten by the phagocytes may prove so acceptable that, in future, they will always be ready to consume any reasonable number of the same kind of microbes that may present themselves—and this theory would rest on foundations possibly more solid than those of any other theory concerning vaccination yet in the field.

Prof. M. L. James, of Richmond, read a paper entitled

DYSPEPSIA WITH NEURASTHENIA AND SOMNOLENCE.

He announced his purpose to make the paper brief and practical, and to write only from his personal observations. He noticed the fact that, although this morbid association was very often a serious inconvenience, and sometimes a grave disability, it had been comparatively little discussed in the literature of the profession. He referred to the fact that it sometimes seemed that neurasthenia might be a result simply of dyspepsia, in part from the interference with nutrition, and in part from a species of nervous shock, differing, of course, in degree from that described in surgery. Oftener, however, he said that it resulted from this condition associated with the nervous exhaustion, brought on by various causes; most frequently, perhaps, by severe mental efforts, watchings and anxiety; very often by the excesses of dissipation, over-stimulation, excessive venery and masturbation. He referred to the fact that, while dyspepsia produced neurasthenia, that neurasthenia also aggravated the dyspepsia, and hence suggested that in treatment, the relations which they bore to each other should be constantly borne in mind; that it was a matter of prime importance for the relief of the dyspepsia that the forces of innervation should be maintained in the utmost possible vigor. That while digestion was a chemical process which might be accomplished in the retorts of the laboratory, it was also greatly influenced by the force of innervation, as has been demonstrated not only by experiments but by everyday observation.

He emphasized the importance of securing to the patient ample sleep as a means of fitting him to sustain the effort of digestion the succeeding day. While the province of his paper was not to go into the discussion of the various forms of indigestion and their special management, it was a proper consideration in the treatment of these cases that it should be considered by the physician, and the treatment and diet adapted to that end. That in all of these cases the diet should be that which is easiest of digestion, and at the same time afford an adequate amount of nutrition, especially in the form of phosphates. The phosphates of food are the best of the vitalized phosphates. An hour or two succeeding the morning's meal should be spent in pleasant mental occupation, scrupulously avoiding anything that could be considered positive mental effort, especially reading and writing, public discourse, or even close attention to such discourse. No laborious effort of mind or body ought to be taken until the process of digestion was well advanced, especially reading and writing, and in bad cases until nearly completed, and that no labor soould be sustained to the condition of positive fatigue.

He referred to dinner as the ordeal most trying in this morbid concatenation, and for that reason that the patient should be put under a certain sort of *training* for the effort of digestion for that meal. No sort of food ought to be taken between breakfast and dinner, and that a sufficient time ought to be allowed to elapse before partaking of dinner, to allow a complete digestion of the morning's meal with a period of rest to the digestive organs, and that the nervous system should be reinforced for the digestive effort at dinner by a period of recumbency lasting from half an hour to two hours, according to the severity of the case, previous to partaking of it, with sleep if procurable, which may be acquired easily by habit.

The articles of dinner also should be easy of digestion and nutritious generally, including a reasonable richness in the phosphates. That a period of relaxation should be taken after dinner with gentle mental occupation, and gentle exercise, preferably passive exercise in a carriage or on horse-back, until the process of digestion should be well advanced. He admonished particularly against the dangers of any active mental effort, including reading and writing, or public discourse. Supper should consist of lighter and more digestible articles of diet than the two preceding meals, and should not be taken until dinner was thoroughly digested and the stomach had had its period of rest, and that there should be entire abstinence from tea and coffee, as being likely to interfere with the coming night's sleep. He emphasized the fact that while medicines were necessary, some such regimen as that he had indicated was equally necessary. He also indicated that while such agents as caffeine would avert one of those oppressive spells after a meal, that pure stimulants were not suited for the cure, and for that reason that tonics, in combination with agents, which in more moderate doses had a stimulating effect, were the remedies to be used. Premising that digestion had been aided by pepsin and other digestive ferments, he said that alcoholic drinks in strictly stimulating doses were

useful, but if carried a step beyond the condition of stimulation to the sedative influence was positively injurious. He indicated the annexed formula as a convenient form of combining the remedies suited to these conditions, from which he had experienced the best of results:

℞	Quiniæ phosphat.....	gr. xvi	
	Strychniæ phosphat.....	gr. ⅛	
	Acidi phosphoric. (50 per cent.)...	m. xx	
	Caffeine citrate.....	gr. xvi	
	Glycerin. puræ.		
	Spts. vini rectificat.....	aa ℥ss	
	Tr. cardamomi co.....	℥j	M.

S.—One or two teaspoonfuls immediately before or after breakfast and dinner, to be repeated, if necessary, every hour or two till the nervous depression is relieved, or every half hour, till one or two doses are taken, if the depression be heavy.

In such extreme cases where the powers of digestion were greatly enfeebled, he suggested the use of concentrated food in liquid form, and especially predigested foods, and in cases where the stomach was disordered to that extent that it would not tolerate such medication, that these remedies, especially in the forms of predigested food, should be administered by the rectum.

(*To be concluded.*)

CHICAGO MEDICAL SOCIETY.

Stated Meeting, September 21, 1885.

THE PRESIDENT, C. T PARKES, M.D., IN THE CHAIR.

DR. CHARLES F. SINCLAIR read a paper on

SPECIAL VERSUS GENERAL STUDY IN MEDICINE.

The medical profession, he thought, should look with favor upon the subdivision of medical work, because we see such vast accumulations of material in all the various departments of medicine that few would care to undertake, or have the ability, to even peruse our medical literature, much less master all the knowledge collected. In this day of rapid interchange of thought, none can be found who can keep abreast of all the discoveries in the various departments of medicine. Another reason for the existence of the specialist is the fact that very few men can secure the expensive instruments necessary to be used in the treatment of the various diseases, nor are there many physicians who could skilfully use them were they so fortunate as to possess them. Many cases cannot be successfully treated without these instruments. In our city, specialties should receive further development, because as they are clearly defined and faithfully adhered to in practice, proportionately does the city rank as a medical center.

DR. W. F. COLEMAN said that while he agreed with the author in the main points in his paper, he thought it should rest with each individual whether he shall confine himself to special practice or emphasize it in general practice. It is advantageous to specialists that they should confine themselves to their chosen fields. But we should not judge of the benefits to be derived from specialties by the individual success of each practitioner, but by the extent each practitioner enriched our literature by the record of his investigations. It is thus that the eye and ear specialist, the specialist in throat and lung diseases, the laryngologist and others have done most to advance medicine.

DR. L. T. POTTER read a paper on

THE TREATMENT OF SYPHILIS.

He said that the treatment of syphilis must be threefold—hygienic, tonic and specific. By the latter is meant the administration of mercurial and iodine preparations. The profession seems to be greatly divided in opinion in regard to the methods of using these remedies and the length of time they should be employed. In scanning the literature on this subject, the reporter was surprised to find that those high in authority differed as to these points. The reporter advanced two propositions: first, that neither the iodine preparations alone, nor mercury alone, can always be relied upon as effective in the treatment of syphilis, but that *both* are necessary to eradicate the disease; second, that the duration of treatment must be at least two years, faithfully carried out, no matter how mild an attack. In support of his first proposition, the reporter quoted Bartholow, Ringer, Jonathan Hutchinson, Keyes, Bumstead and Taylor as saying that mercury should be given in the primary and secondary stages of syphilis, and iodine of potassium in the tertiary stage. They all agree that both must be used to effect what is called a cure. In support of his second proposition, he quotes Van Buren and Keyes, Fournier, Bumstead and Taylor, as insisting upon the treatment extending over a course of two years or more. Diday says the minimum time for treatment is twenty-two months. The two year course of treatment does not mean the continual administration of mercury or iodine, but at intervals the remedy may be discontinued for a short time, if it seems to have a debilitating effect on the patient. In the light of such unanimity of opinion of eminent authorities upon this question of duration of treatment, it is surprising that intelligent physicians will positively assure their patients that they are *cured* of syphilis at the expiration of a course of treatment lasting from four to six months!! A physician who does so, is certainly criminally negligent. Then it becomes all to impress upon patients the importance of carrying on the treatment for at least two years.

DR. E. L. HOLMES said that he considered the paper very valuable, because the author lays so much stress upon the importance of thorough and long-continued treatment. One of the most important lessons he had ever received was to treat syphilis according to the plan the gentleman had advocated. Many years ago he had been taught this lesson by sad experience. It had been his lot to see many patients suffering from specific diseases of the eye long after they had been discharged by their physicians as cured. He could not understand how any physician can believe it possible to cure syphilis without carrying out the treatment a long time. In many years' practice in this city he cannot remember of having seen but three primary syphilitic lesions, and these all occurred on some portion of the eye. He saw one man who had on the upper eyelid a sore which resembled and was treated as a burn, until its

course decided it to be a chancre. The man would not tell how he obtained it, but it readily disappeared under specific treatment. A great many diseases of the eye occur thus, and the physician is unable to find out how they arise. Many years ago it was taught that iodide of potash, if given in large doses, would effect a sure and speedy cure. But Dr. Holmes thought the treatment by large doses of iodide dangerous, as it ameliorates the symptoms so quickly as to cause the physician and patient to abandon the remedy too soon. He thought it best to give the patient all the mercury he can bear in the primary and secondary stages. Rub it in the skin and give it internally. Follow this up eighteen months or two years, and then give iodide of potassium later. Every three or four months give a course of treatment for years after. You will have no trouble impressing upon intelligent people the importance of long-continued treatment.

Dr. R. Tilley said he wished to refer to one point not touched in the paper, and that is, patients treated for syphilis are often told by their physicians of the importance of long-continued treatment, but they will not heed these warnings and do not return. This fact will excuse the physician many times, as it is not in his power to carry out the treatment when he wishes; and thus physicians should often be relieved of the blame of not having treated their patients long enough. He did not think any intelligent physician would advocate treatment under two years, and he believed Keyes, in his last edition, extended the time of treatment to four years. Dr. Tilley was of the opinion that we cannot do without mercury, and yet some in high places teach this doctrine. Those who try to treat syphilis without mercury are certainly responsible for later developments.

Dr. J. Zeisler thought the present treatment of syphilis is not scientific, and that there had been little advance in this direction in the last century. Cases are known in which, after seven years' treatment, symptoms of the disease returned. Take the case of Prof. Zeissl, who died last year. He was infected while opening a bubo several years ago. He certainly knew how to treat himself, and yet he died of cerebral syphilis. This does not look as though the treatment of syphilis is yet founded on a scientific basis. If the discovery of the bacillus of syphilis proves to be correct, it may prove the means of enabling us to treat syphilis scientifically.

Dr. G. C. Paoli said he is by nature a cosmopolitan, and always selects the best from the writings of all nations. A great many books have been written on this subject, among which Ricord's stands first. Ricord was a man of great talent, experience and powers of observation. He had unexcelled opportunities for study in the Paris Hospital when he was the chief physician. In regard to treatment, all agree that mercury must be administered for a long time. There are syphilitic cases in which mercury is contraindicated, namely, phthisical patients and in albuminuria, unless we believe syphilis is the cause of the albuminuria.

Dr. R. Tilley referred to one point introduced by Dr. Zeisler, who referred to Professor Zeissl as having died of cerebral syphilis, claiming that no one would doubt Prof. Zeissl's ability to cure syphilis. But the question is not whether Prof. Zeissl knew how to treat syphilis, but how did he treat himself? Cooper, in his book on syphilis, if he (Dr. Tilley) were not greatly mistaken, cites Prof. Zeissl as a type of those who used mercury sparingly. If that is so, and Zeissl used it only sparingly on himself, then the death of Zeissl from cerebral syphilis is a very important lesson, and bears materially on the subject under discussion.

Dr. Zeisler said he knew that in the case of Prof. Zeissl mercurial inunctions were made, but to what extent he was unable to say.

Dr. L. T. Potter closed the discussion by expressing himself as gratified at the amount of discussion which had been aroused; however, he was surprised at the statement that there had been little or no advancement in the treatment of syphilis. In this day of elegant pharmaceutical preparations and easy administrations of mercurials and iodides, he thought there had been a great advancement, for pharmacy and chemistry have stepped in and given us preparations we did not use many years ago. Mercury should not be given when it is producing a debilitating effect.

The President, Dr. C. T. Parkes, presented

A SPONGE REMOVED FROM A UTERUS.

A short time ago he was called to see a lady who had been treated by a physician who introduced a sponge tent into the cervix uteri, and instructed the lady to allow it to remain two or three days, and then pull it out. She attempted to do so, but the string broke and the sponge was not obtained. After three weeks of suffering, with a discharge per vaginam, Dr. Parkes was called to see her. By digital examination he could not find any evidence of the sponge, the external os being closed so as to merely admit a probe. But he could not find any sponge by probing, so he introduced an Ellinger dilator, and soon seized the sponge with a forceps and brought it out. The symptoms present passed rapidly away, and the patient is now well. The point to be learned is, that when a physician introduces a sponge tent, he himself should remove it.

MISSISSIPPI VALLEY MEDICAL SOCIETY.
(Formerly Tri-State.)

Eleventh Annual Meeting, held in Evansville, Ind., Sept. 8th, 9th, and 10th, 1885.

(Concluded from page 390.)

Dr. Wm. A. Byrd, of Quincy, Ill., read a paper on

TETANUS.

(See page 399.)

Dr. Geo. B. Stewart, of St. Louis, had used Fowler's solution in tetanus, but was unable to say whether it had been the means of cure or not. He thought the pathology of the disease was very little known. He reported a case of recovery from both trephining for injury to the skull and tetanus. He agreed with

Dr. Byrd that arsenic should be given in gradually increasing doses, as much as the patient can bear. All the cases he has known to recover have done so under arsenic,

DR. WM. PORTER, of St. Louis, reported a case of severe tetanic convulsions from a slight bruise on the finger, which had been covered with collodion. Chloral was given but no arsenic used. Recovery followed.

DR. G. V. WOOLEN, of Indianapolis, had found sponging the injury with a solution of chloral to act very well.

SECOND DAY—AFTERNOON SESSION.

DR. G. V. WOOLEN, of Indianapolis, read a paper on

NASAL STENOSIS.

The writer first called attention to the want of attention in former times to nasal disease, and the very great advance made towards a correct knowledge of it in the last ten years, thus accounting for want of correct appreciation by the profession at large which still exists. He then briefly detailed the peculiarities of the anatomical construction of the nasal and accessory cavities, specially adapting them to the performance of their physiological functions, viz: Olfaction, respiration, conduction of secretion to the pharynx, and as an accessary to articulated speech. The title of the paper called attention only to a symptom of disease, but it and other symptoms often became of such importance as to demand attention as a disease.

The chief causes are hypertrophy of turbinated bodies and mucous membranes, deviation of septum, adenoids, polypi, exostoses, and hypertrophied pharyngeal tonsils. The degree of stenosis did not always denote the degree of disturbance, as is now well appreciated in the causation of hay fever. The disturbances which follow were discussed under the following heads: 1st. Interference with the respiration act. 2d. With the natural flow of secretion. 3d. With speech and song. 4th. With olfaction. It is difficult, in dealing with a given case, to determine which of these is the most important. Intemperance with nasal breathing soon establishes disease of other parts of the respiratory organ by producing mouth breathing, a most dangerous practice, which often does not cease after removal of the cause.

Attention was then called to the warming and moistening of the air and extraction of dust and other impurities in normal nasal breathing, most important functions, and when interrupted become etiological factors of disease of no small degree. The law of catarrhal disease is that of descent, so that much that is supposed to originate in the lungs possibly does not, as one, if observant, is not long in noticing pharyngeal, laryngeal, bronchial and other such maladies disappear after the removal of obstructions higher up, especially nasal stenosis. Attention was then called to defective drainage of secretions of nose, eye and accessory cavities. The peculiar conformation of the nose is especially adapted to the drainage which was shown to be interfered with by any disturbance of the contour of the parts. Evaporation and inspissation at once lead to clogging and dropping in pharynx of secretions, and their retention in the various cavities, giving origin to ozœna, and all of the direful results. Without nasal breathing there can be no successful smelling, which function, being in the superior tract of the nose, is easily interrupted by stenosis. Taste and smell are so intimately associated that their reciprocal functions depend upon that free passage-way of the nose. Good smelling and taste make eating one of the chief luxuries of life. Our schools are full of children vainly trying to articulate successfully owing to enlarged nasal and pharyngeal tonsils. The nose is an important resonance-chamber, and if by any cause obstruction occur, great modification in tone must ensue, and much that is supposed to be the result of faulty education and physical peculiarities is in fact the result of obstruction of this function.

DR. WM. CHEATHAM, of Louisville, said that he thought Dr. Woolen had failed to refer in his paper to nasal stenosis as a cause of asthma and hay fever. It is now a well-known fact that one of the principal factors in the production of hay fever is situated in the nose, and often depends secondarily upon nasal stenosis. There are three factors which must be present to produce hay fever: "an external irritant," as pollen, etc.; "a predisposition on the part of the system to become influenced by this irritant;" and "a vulnerable or sensitive area through which the system becomes influenced by the irritant." Since these three factors have been recognized, "hay fever," which to this time was considered among the incurable diseases, now is among the most readily relieved. The sensitive areas are located in the region of the distribution of the spheno-palatine ganglion, that is, on the inferior and middle turbinated bones and the pharynx. That these sensitive areas are so situated is proved by their irritation by means of a probe. By this means all the symptoms of "hay fever" can be produced, and by the destruction of these areas by means of acids and caustics hay fever is cured, also that by anæsthetizing these areas by means of the muriate of cocaine, all the symptoms of hay fever are relieved. "I do not care how much stenosis we may have, we must have the sensitive areas before we can have hay fever."

DR. WM. PORTER, of St. Louis, read a paper on

SOME ERRORS IN PHYSICAL DIAGNOSIS.

(See page 345, Vol. V, No. 13, this JOURNAL.)

DR. ARCHIBALD DIXON, of Henderson, Ky., read a paper on

PROGRESS IN MEDICINE.

A review of the history of medicine during the past year will show that solid advances have been made in methods of treatment, remedies of value have been added and the usefulness of older ones confirmed. The introduction of cocaine as a local anæsthetic, had nothing more been done, would mark this as a year ever to be remembered by our profession.

The great question now is, is cholera a preventable

disease, and if so, can it be kept from our land? There is no doubt that each and every visitation has been the result of importation. Now the point to be determined is, is the germ origin of the disease the true one? Is the germ always present in cholera? Is it ever present elsewhere? Koch maintains that there is a definite organism associated with cholera, and this opinion is supported by many of the best men of our profession both in this country and in Europe. After discussing the bacillus question in all its phases, he thought that it followed that the poison of cholera must be a micro-organism, for nothing but a living thing could reproduce itself, and he considers that Koch's position, so far, has remained unassailable. If, then, the germ theory of cholera be true, and it be a contagious and portable disease, then, as a matter of course, it must be admitted that it is a preventable disease, and the point at once arises, how can we most easily destroy these germs? The answer is, by disinfection and the proper use of germicides, with a sufficient quarantine to guarantee detention until this process is complete. Detention without disinfection is not effective. With the efficacy of germicides, quarantine should become what it is intended to be, not a delusion and a snare. There is no better plan presented than that of Joseph Holt,[1] M.D., President of the Louisiana State Board of Health, which the doctor presented in his paper. Perhaps in New Orleans, whose people have been so often scourged, these precautions of Dr. Holt will be carried out, but not elsewhere. Dr. Rauch,[2] Secretary of the State Board of Health of Illinois, says that if no vessel were allowed to leave a port infected with cholera or carrying persons or things from an infected region, without being first made secure against the possibility of carrying the disease, it would of itself render unnecessary all other means of combating cholera, so far as we are concerned. But this has never been accomplished. During the existence of Asiatic cholera in Europe this country is only safe when a system of sanitary supervision is practised over the immigrant and his effects. The instructions of our best sanitarians, if carefully heeded, will demonstrate that cholera can be kept from our country. The Royal Italian Society of Hygiene has arrived at conclusions which, owing to their experience with the cholera during the past year, are worthy of receiving great consideration.

Evening Session.

Dr. N. M. Baskett, of Moberly, Mo., read the history of a case of

Pistol Shot Wound of the Mouth.

It was from a 32-calibre revolver, and occurred in a young mulatto woman. The ball entered on the inside of the mouth, about the junction of the ramus of the inferior maxillary with the body of the bone, and extended slightly inwards and markedly downwards, barely missing the tongue, piercing the pillars of the fauces near the right tonsil, and losing itself in the muscles of the neck. The probe passed inwards and downwards, and indicated a course which would have brought the ball to the surface on the back, at a point midway on a straight line drawn from the spinous processes of the first dorsal vertebra to the middle of the spine of the scapula. But the probe did not pass one-half the distance from the ramus of the jaw to the point indicated, and, as the bullet could not be felt, it was evident that its course must have changed. At the point of the shoulder was another wound, extending upward and inward directly towards the line which the other wound would have made, had the course of the bullet continued. The patient was positive that the wound in the left shoulder was made first and by the first shot fired, and the wound in the mouth made by the third shot. The second shot had missed her entirely.

There was but little hæmorrhage from either wound, and the woman suffered but little from shock. Probing the wound of the left shoulder indicated that the bullet was probably located near the left of the spinous process of the first dorsal vertebra, and was not considered dangerous.

The wound in the mouth had evidently been made while the mouth was open, as there was no external wound. We had, then, a wound covered by the masseter, and other facial muscles, in the first part of its course, and the ramus and body of the inferior body of the inferior maxillary. In the second part of its course, the fascia, muscles and vessels of the infra-maxillary space, and thirdly, in the neck, where the course of the bullet was lost, it was covered by the integuments, fascia, sterno-cleido-mastoid, and omo-hyoid muscles, and in close relation to the important blood-vessels and nerves of that region. The wound was cleansed, opium administered, and for the first few days the woman did well. Fever, not excessive, presented itself, and the wound suppurated and discharged greatly. It was syringed out twice daily with an antiseptic solution. The patient's condition was considered fairly good up to the day of her death.

On the evening of the seventh day hæmorrhage occurred, and considerable blood was lost before it could be checked by the use of various astringents, styptics and coagulants. She was much prostrated. In about an hour the hæmorrhage returned, and in spite of all efforts to check it she expired in about five minutes.

The autopsy showed that the muscles of the neck along the course of the wound were in an inflamed and almost gangrenous condition. The secretion of pus was enormous, and of a very unhealthy character. Dark bloody clots of decomposed blood existed along the course of the wound in close proximity to the blood-vessels, which appeared to be inflamed. It seemed that hæmorrhage had occurred from the facial artery close to its origin with the carotid. The bullet which produced the wound was found resting on the first rib close to its junction with the vertebra. The bullet which entered at the point of the left shoulder was found lying close to the spinous process of the first dorsal vertebra, as we had anticipated.

The remarkable features of this case are: 1. The location of the principal wound; 2. The absence of

[1] Review of Quarantine and Maritime Sanitation, by Joseph Holt, M.D. New Orleans: 1885.
[2] North American Review, August, 1885.

marked shock; 3. The inflamed condition of the great blood-vessels of the neck revealed by the autopsy; 4. The extensive infiltration of the muscular tissues with pus, and the absence of any symptom of pyæmia up to the time of death.

DR. S. C. CHARLTON, of Seymour, Ind., discussed the question

IS THERE A TYPHO-MALARIAL FEVER?

He does not propose to definitely answer the question, but to give some reasons for believing in the prevalence of such a fever to a large extent throughout the Western and South-Western States. Since the publication of Dr. J. J. Woodward's report, in 1862, of a fever which prevailed in the U. S. A., which, after careful study, he denominated as typho-malarial, there has been much controversy in regard to the accuracy of the name. In large cities there is much decaying organic, and in the country much decaying vegetable matter, which is the cause of malarial disease, but never the cause of specific infectious disease. But when the spores of infectious disease are introduced into the system, already under the influence of malaria, they as certainly produce the phenomena of typho-malarial fever, as the "pathogenic spores" of the various infectious diseases will produce their special disorders, or the specific poison of typhoid fever will produce that disease. Accepting this view with regard to septic poison, we can readily understand why hydrant water containing septic matter may develope typho-malarial fever, as was the case in Evansville four years ago.

All writers admit the strong analogy between typhoid and typho-malarial fever, namely diarrhœa, tympanites and iliac tenderness. The symptoms become more or less marked during the second week of the disease. The characteristic eruption of the typhoid fever may be observed. Low delirium, deafness, subsultus tendinum, etc., occur more frequently, earlier, and are more marked than with the simple remittent. Enlargement or suppuration of one or both parotids are sometimes noticed. The forming stage is longer than in simple remittent. The fever is longer and its gravity greater. Perforation of the intestine is liable to occur. Bronchitis and pneumonia are frequently developed. Convalescence is more protracted. In some cases the phenomena of typhoid fever and of periodical fever are intermingled, in varying proportions, in some the periodical, in others the typhoid phenomena predominating. Cases of typho-malarial fever occur in most if not all malarial regions, which shows that the special cause of typhoid fever is not held in abeyance by the presence of malaria. The extinction of malaria is followed by cases of unmixed typhoid fever, as if the latter followed in the wake of the former. Dr. Flint says, that typho-malarial fever is caused by the combination of malarial and the special causes of typhoid fever. It has been said that remittent fever becomes converted into typhoid fever. This is not accurate. There is not a metamorphosis of the one disease into the other, but a combination of both diseases. The changes which take place in the blood in typho-malarial fever, so far as we are able to determine, are similar to those which occur in typhoid fever, combined with those which are characteristic of malarial fever.

The published literature on typho-malarial fever is scarce, Drs. Flint and Loomis being the only two authors who have gone into the question thoroughly, and they do not agree as to its etiology. In the writer's opinion, Dr. Loomis is correct, and if the name "typho-malarial fever" is not correct, he would suggest that we call it septic remittent. Typho-malarial fever is not characterized by the typical course observed in typhoid, but varies as the septic or malarial poison predominates. It is generally ushered in by a distinct chill, and in some instances without premonitory symptoms. This is followed by a high temperature, varying from 103° to 104°, and a pulse of 100. It is frequently noticed that the pulse becomes slower during the second and third weeks, falling from 100 down to sixty, so that we sometimes have a comparatively slow pulse, throughout the course of the disease, and sometimes with a temperature of 103° the pulse beat will not exceed sixty or seventy. Another point in this connection is that if the special cause of typoid fever is necessary to the development of the typho-malarial fever, why is it that we have a hundred cases of typho-malarial fever in a few months, and not a single case of well-marked typhoid, as was the case in Seymour during the past year? It may be that the presence of malaria is sufficiently potent to hold this special cause, whatever it may be, in abeyance.

In conclusion, he said that he was satisfied with the name, typho-malaria, as the most appropriate for this form of fever, and until future study shall give a word more expressive of that disease, he will cling to it and treat the disease accordingly.

Dr. Amos Sawyer, of Hillsboro, Ill., read a paper on *The Relation of Mind to Matter;* Dr. H. J. B. Wright, of Olney, Ill., a paper on *Three Cases of Nervous Disease, with Special Reference to Pathology;* and Dr. James H. Letcher, of Henderson, Ky., a paper on *Cat-Gut Ligatures.*

THE ADVISORY COMMITTEE

appointed on the previous day, after several meetings, made the following recommendation:

1st. That the organization by sections be dispensed with;

2d. That a Committee on Programme, consisting of three, be appointed by the Chair;

3d. That the next meeting be held the second Tuesday in July, 1886;

4th. That papers alternate, medicine, surgery, obstetrics;

5th. That book matter, generally known, be omitted from the papers;

6th. That new things be presented;

7. That greater brevity be practiced;

8th. That more patients and specimens be presented. Adopted.

The President appointed the following

COMMITTEE ON PROGRAMME.

Drs. G. V. Woolen, of Indianapolis; Amos Sawyer, of Hillsboro, Ill.; and Wm. Porter, of St. Louis.

The Committee on Nominations reported the following

OFFICERS FOR THE ENSUING YEAR.

President, Dr. Arch. Dixon, of Henderson, Ky.; 1st V. Pres't, Dr. G. W. Burton, of Mitchell, Ind.; 2d V. Pres't, Dr. T. D. Washburn, of Hillsboro, Ill.; 3d V. Pres't, Dr. Wm. Cheatham, of Louisville, Ky.; Secretary, Dr. H. J. B. Wright, of Olney, Ill.; Treasurer, Dr. F. J. Lutz, of St. Louis, Mo.

Adjourned to meet at Quincy, Ill., the second Tuesday in July, 1886.

FOREIGN CORRESPONDENCE.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The fifty-ninth session of this Association met this year for the second time in the Granite City of Scotland—Aberdeen. Nineteen years ago was held its session here under the Presidency of the Prince Consort. This year Sir Lyon Playfair presided, and read his address on Wednesday evening to an audience of about 3,000, gathered in the Music Hall, complimenting in the very highest terms last year's meeting at Montreal. His paper was lengthy, taking in a wide range of practical thought. He maintained, and gave figures in proof, that England was behind several other nations in appropriating funds for educational and scientific purposes, and referred warmly to Washington's farewell address as salutary advice on the importance of popular and scientific education—quoting his language. The convention is divided into eight Sections, the mention of which will give an idea of the scope of study. 1. A—Mathematical and Physical Sciences; 2. B—Chemical; 3. C—Geology; 4. D—Biology; 5. E—Geography; 6. F—Economic Science and Statistics; 7. G—Mechanical; 8. H—Anthropology.

Prof. McIntosh, as chairman of the Biological Section, in his opening address reviewed the subject of *Phosphorescence of Marine Animals*, dwelling upon the Nactiluca of the protozoa family, which he said was but "a gelatinous sphere" spreading its luminosity at times over large areas of the sea. Nor did he neglect the crustacea and molluscs as phosphorescent generators, and thought, no doubt, this power enabled the inhabitants of the dark depths of the sea to see their way without the light of the sun. He also alluded to the firefly and other luminous species, but did not venture an opinion upon the *modus causandi*—saying that was unknown to scientists.

The history and comparative anatomy of the Tay whale—Megaptera Longimana—was ably and interestingly discussed by Dr. Struthers, Professor of Anatomy in the Aberdeen University. Prof. Fowler maintained that the whale was derived from a four-footed land animal.

Sir John Lubbock's subject was *Insect Instinct*, choosing the ant and the bee for study and illustration. He thought it was curious that if a strange ant were mixed with a nest of 500,000 it would be recognized by every one at once almost, and dealt with as an intruder and enemy. He thought the recognition was due to scent rather than to sight or feeling. He had kept some queen bees under observation twelve years, and though their eggs were sterile, still ovation went on, and their joints were reasonably supple yet.

Dr. J. McGregor-Robinson entertained the Section for more than half an hour, giving an ocular demonstration, by means of a complex apparatus, of the *Direct Action of Anæsthesia on a Frog's Heart*. The frog's heart was suspended in a proper medium, and kept beating, each pulsation moving an indicator, which registered the variations, and was visible to the entire audience. I asked the doctor to furnish me a statement of results as to the difference of effects of chloroform and ether, which is kindly given as follows:

A marked quantitative difference was shown between the different anæsthetics used, as exhibited in the following tables which show the stimulating, reducing and paralyzing effects of the anæsthetics on the heart.

	Stimulating.	Reducing.	Paralyzing.
Ether	1 per cent.	1 1/5 per cent.	2 per cent.
Ethydine bichloride	1/20 " "	1/10 " "	1/5 " "
Ethyl bromide	1/20 " "	1/5 " "	1/4 " "
Chloroform	1/20 " "	1/20 " "	1/10 " "

A qualitative difference was also shown. Ether and ethydine very much resemble each other. The relaxation after each contraction was complete with chloroform and bromide of ethyl, though a marked difference was shown; the heart exhibited a great tendency to contract spasmodically around the canula. So marked was this that it was difficult to pass fluid through the heart so as to wash out the drugged fluid. This action was never observed after the heart had been fairly under the influence of ether and ethydine. It was noticed in more than one case that the heart became spasmodically contracted around the canula immediately after receiving the first stimulating dose of the drug. This occurred with ether as well as with chloroform. With ether, however, it rapidly passes off, and does not recur after the influence of the anæsthetic is felt. It did not so readily pass off in the case of chloroform. Might not such action account for some deaths under the use of chloroform before any great quantity of the drug has been administered? The heart recovered speedily from the influence of ether, but slowly from chloroform. Ether was found not to be cumulative, but that could not be said so decidedly of chloroform.

Prof. McCormick, on the subject of the *Action of Cold on Microphites*, said that cold and freezing only arrested development, but that *heat* would sterilize all fluids. Referred to Coleman's method of freezing meat, 129° F., for transportation to distant destinations, and explained the curious methods of cultivating microbes. Recurring then to the subject he said: "Experiments discourage any practical hope of destroying microphites by cold. Freeze paste and the water is crystallized, but the coloidal matter remains, so that on admitting heat again the water returns to its normal condition; the microbe, therefore, does not crystallize, but remains in waiting for warmth to restore it to its normal condition." Instances the similar condition of the frozen frog. In this way life may be arrested and inertness main-

tained in a moderate way for almost any length of time, with complete restoration when returned to proper environments. A rabbit had been restored, after being rigid, under a temperature of 150° F., for one hour and a half. It has been demonstrated by these experiments that a temperature lower than that of any meteorological observation had been induced, and yet vitality restored by the application of heat.

The museums and laboratories here are quite extensive, giving ample advantages, but hotel accommodations are altogether inadequate for such large bodies, for all are overcrowded, and lodgings are generally taken, so that even these are difficult to obtain. A. B. T.

Sept. 12, 1885.

MISCELLANEOUS.

NEPHROLITHOTOMY.—MR. VICTOR HORSLEY removed a calculus weighing two and a quarter ounces from the kidney of a woman on September 16. There had been symptoms of renal calculus for four years. Since the operation the urine, which was fœtid before, has become normal, and the whole of the operation wound, with the exception of the track of the drainage-tube, healed by first intention within five days.

THE FLOATING WASH-HOUSES OF PARIS are to be suppressed in consequence of a report drawn up by Engineer to the Seine Navigation Bureau, they being considered dangerous to the health of the city.

STATISTICS ON INSANITY.—The International Congress of Physicians engaged in the cure of mental diseases was recently held in Antwerp. The scope of the Congress comprises the bases of good international statistics concerning the mentally diseased; and the relations between criminality and mental disease. The Congress has appointed an international committee to determine the headings for the bases of statistics regarding mental diseases.

DR. EDWARD O. SHAKESPEARE has been appointed by the United States Government to go to Europe for the purpose of investigating the cholera. The appointment reflects great credit on the Government.

A CONGRESS OF RUSSIAN ALIENIST PHYSICIANS will be held in February, 1886.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 26, 1885, TO OCTOBER 2, 1885.

Col. T. A. McParlin, Surgeon, directed to transfer his duties and the public funds for which he is accountable, as Asst. Medical Purveyor, to Capt. Henry Johnson, Medical Storekeeper, who will, in addition to his present duties, temporarily perform the duties of Asst. Medical Purveyor, New York City. (S. O. 223, A. G. O., Sept. 29, 1885.)

Maj. D. G. Caldwell, Surgeon, ordered from Ft. Laramie, Wyo., to F. D. A. Russell, Wyo. (S. O. 97, Dept. Platte, Sept. 25, 1885.)

Capt. G. W. Adair, Asst. Surgeon, granted leave of absence for one month, with permission to apply for one month's extension. (S. O. 104, Dept. Dak., Sept. 18, 1885.)

Capt. Louis Buchmin, Asst. Surgeon, ordered from Ft. D. A. Russell, Wyo., to Ft. Laramie, Wyo. S. O. 97, Dept. Platte, Sept. 25, 1885.)

First Lieut. Geo. F. Bushnell, Asst. Surgeon, ordered from Dept. Dak. to Dept. East. (S. O. 210, A. G. O., Sept. 28, 1885.)

First Lieut. C. N. B. Macauley, Asst. Surgeon, relieved from duty at Ft. A. Lincoln, D. T., and ordered for duty at Camp Poplar River, M. T.

First Lieut. Wm. L. Knudler, Asst. Surgeon, when relieved from duty at Camp Poplar River, M. T., by Asst. Surgeon Macauley, to report to commanding officer Ft. Snelling, Minn., for duty. (S. O. 105, Dept. Dak., Sept. 21, 1885.)

First Lieut. P. G. Wales, Asst. Surgeon, relieved from temporary duty at Boisé Bks., and ordered for duty at Ft. Cœur d'Alene, Idaho. S. O. 160, Dept. Col., Sept. 21, 1885.)

First Lieut. C. B. Ewing Asst. Surgeon, ordered from duty at Ft. Stanton, N. M., and ordered for duty at Ft. Leavenworth, Kan. (S. O. 147, Dept. Mo., Sept. 25, 1885.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING OCTOBER 3, 1885.

Surgeon William H. Jones, to Navy Yard, League Island, Pa., Oct. 15, as the relief of Medical Inspector M. Bradley.

Medical Inspector Michael Bradley, detached from Navy Yard, League Island, Pa., Oct. 15, and placed on waiting orders.

Asst. Surgeon Thomas Owens, to Naval Station, New London, Conn., as the relief of Surgeon Wm. A. Corwin.

Surgeon Wm. A. Corwin, detached from Naval Station, New London, Conn., and ordered to the U. S. Str. "Adams," Oct. 31.

Surgeon A. C. Magruder, ordered to the U. S. Str. "Yantic," without delay, as the relief of Surgeon H. L. Law.

Surgeon H. L. Law, detached from the U. S. Str. "Yantic," and wait orders.

Surgeon W. J. Simon, detached from the Naval Academy, Oct. 1, and wait orders.

Surgeon M. C. Drennan, detached from the Naval Academy, Oct. 1, and wait orders.

P. A. Surgeon Arthur G. Cabell, to the U. S. Str. "Adams, Oct. 31.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDED OCTOBER 3, 1885.

Austin, H. W., Surgeon, to proceed to Burlington, Vermont, on special duty. Sept. 23, 1885.

Bailhache, P. H., Surgeon, detailed as chairman of Board for the physical examination of officers of the Revenue Marine Service. Sept. 28, 1885.

Vansant, John, Surgeon, order to New Orleans, La., revoked; to proceed to St. Louis, Mo., Oct. 2, 1885.

Purviance, George, Surgeon, to proceed to Louisville, Ky., as inspector. Oct. 1, 1885.

Gossaway, J. M., Surgeon, detailed as chairman of Board for the physical examination of officers of the Revenue Marine Service. Oct. 3, 1885.

Godfrey, John, Surgeon, order of Sept. 16 amended; to proceed without delay to Louisville, Ky. Sept. 28, 1885.

Goldsborough, C. B., Passed Asst. Surgeon, order of Sept. 16 amended; when relieved, to proceed to Chicago, Ill. Oct. 1, 1885.

Irwin, Fairfax, Passed Asst. Surgeon, detailed as recorder of Board for the physical examination of officers of the Revenue Marine Service. Sept. 28, 1885. To examine physically, and instruct crews of the Life-Saving Service, Third District, in the method of restoring the apparently drowned. Oct. 3, 1885.

Banks, C. E., Passed Asst. Surgeon, detailed as recorder of Board for the physical examination of officers of the Revenue Marine Service. Oct. 3, 1885.